NATIVE PEOPLES, CONTINUING LIFEWAYS

THE NATIVE AMERICAN CULTURAL PROJECT

TEACHER RESOURCE PACKET

Project of the 1994 Kentucky State Fair

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Native Peoples, Continuing Lifeways: The Native American Cultural Project

1994 Kentucky State Fair

Teacher Resource Packet

With chapters written by Native American specialists, archaeologists, and educators.

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Suggested Classroom Activities prepared for each chapter by the authors, Stephanie Darst, and the following Kentucky educators:

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Preface

Dear Educator:

We hope this Teacher Resource Packet for Native American culture will become a useful addition to your classroom teaching materials. Too many of the resources available to teachers are incomplete or even inaccurate regarding Kentucky's native inhabitants and their rich and diverse cultures. One of the goals of the Native American Cultural Project, a two-year exhibition project of the Kentucky State Fair, was to provide new resources and interpretive materials to a broad audience in and around the state of Kentucky. Kentucky teachers are an important part of that audience.

Following the exhibition of "Discover Indian Traditions" at the 1993 State Fair, 300 copies of the first draft of this publication were sent to teachers for evaluation. Since this time, we have worked to expand the packet, adding two important new components: chapters written by Native American specialists and suggested classroom activities prepared by a panel of Kentucky teachers.

Chapters 6, 7, and 8 express the Native American viewpoint and expand the scope of the writings to the Woodland Region, the cultural region of which Kentucky is a part. Chapter writer Jim Rementer provides the perspective of the Native American language teacher, struggling to preserve a vital aspect of the Delaware Indian culture. Don Secondine is a talented artist, storyteller, and traditional flute maker, descended from Delaware chiefs. Gwen Yeaman shares her unique knowledge as the foremost expert on Woodland Indian basketry. All are tradition bearers and teachers among the Native American people, and all share their knowledge with teachers and students of native culture on a regular basis.

This publication has greatly benefited from the careful reading and the creative development of classroom activities by four Kentucky educators, one representing each teaching level: primary, elementary, middle, and secondary. Our thanks to Peggy Walther, Kent Freeland, Jeanette Groth, and Susan Daniel for their dedication, enthusiasm, and wonderful ideas.

In this packet we have tried to incorporate the spirit and the language of the Kentucky Education Reform Act (KERA), to make the chapters user-friendly for curriculum development. Each chapter includes information on the topic, lists of accessible resources, and suggestions for classroom applications. We hope that teachers see endless possibilities in these rather broad suggestions, for they are just a starting place.

Those of you who may be unfamiliar with KERA should find the materials useful with the help of a brief vocabulary:

Learner Outcome - Boxes of text before each group of Classroom Activities refer to numbered "Learner Outcomes." Although the new "Academic Expectations" have been issued, we have retained the "Learner Outcomes" because they are well-developed in the Kentucky Department of Education's publication, *Transformations: Kentucky's Curriculum Framework*. *Transformations* outlines the 75 learner outcomes which students are expected to achieve under KERA. These outcomes are based on Kentucky's Six Learning Goals: 1) To use basic communication and math skills for purposes and situations they encounter in life; 2) To apply core concepts and principles from mathematics, the sciences, arts and humanities, social studies, practical living studies and vocational studies for purposes and situations they encounter in life; 3) To become self-sufficient individuals; 4) To become responsible members of a family, work group or community; 5) To think and solve problems across the variety of situations they encounter in life; and 6) To connect and integrate the knowledge they have gained in school into their own lives.

"PE" or Performance Event - assessment tasks that require students to apply what they have learned; often cooperative group tasks.

"P" or Portfolio - a representative collection of the student's work.

"OE" or Open-Ended Questions - Exploratory discussion questions meant to expand thoughts and invoke multiple responses rather than singular, "correct" answers.

We invite your comments, suggestions, and classroom experiences using this Teacher Resource Packet. Please address correspondence as follows:

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Copies of this publication have been sent, without charge, to many Kentucky schools and public libraries, thanks to a grant from the Kentucky Heritage Council. Additional copies may be available for the cost of printing and postage. To order additional copies, please send a written request, along with your name, address, and telephone number to:

The Kentucky Heritage Council
Native American Teacher Resource Packet
300 Washington Street
Frankfort, Kentucky 40601

Continue to look to the Kentucky State Fair as a resource for innovative new educational projects, and please let us know how we can create the most accessible resources for the classroom.

Chapter 1

Separating Fact From Fiction: Myths About Kentucky's Native Peoples

by A. Gwynn Henderson[1]

Introduction

Few Kentuckians are aware of the richness and diversity of the Commonwealth's native cultural heritage. It's easy to forget that native peoples lived here, since neither large resident American Indian communities nor tracts of land set aside as reservations exist in Kentucky today. When Kentucky's native peoples are considered, however, misconceptions abound. These incorrect ideas range from the specific (how native peoples dressed, how their houses appeared, how they made their living, what language they spoke) to the general (the diversity of their way of life, the length of their presence here, their place of origin, their spiritual beliefs, and the organization of their political and economic systems).

Myths and stereotypes are perpetuated as long as people distrust those who are different from themselves and refuse to see the value of all ways of life. We need to correct these stereotypes and dispel these myths. We need to recognize the humanity of the American Indian legacy. These people and their achievements are a part of our Kentucky heritage. Their story deserves to be understood and appreciated.

A consideration of four main stereotypes and myths can help present a truer picture of Kentucky's indigenous groups. These are 1) native groups never lived permanently in what is now Kentucky, they used it only as a hunting ground; 2) native peoples were savages or were children of nature; 3) a race of Moundbuilders, not Kentucky's prehistoric native peoples, built the mounds; and 4) all native peoples shared a similar way of life.

1. The Myth of the Dark and Bloody Ground: Indians Never Lived Permanently in Kentucky

Perhaps the most tenacious myth, which in all of its ramifications embodies, in a sense, all of the other myths and stereotypes surrounding Kentucky's native peoples, is the myth of the Dark and Bloody Ground. The most likely source of the phrase "dark and bloody ground" was a statement made by Dragging Canoe, a

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[1] Sections of this narrative were adapted from The Prehistory of Man in Kentucky by K.M. Fraser (Murray, KY: Center for Environmental Education, Murray State University, 1986).

Cherokee Indian leader present at Richard Henderson's negotiation and signing of a March 16, 1775 treaty at Sycamore Shoals that transferred a large part of what is now Kentucky from the Cherokee Nation to the Transylvania Company. As the transaction was being completed, Dragging Canoe was reported to have said that a dark cloud hung over the land, known as the Bloody Ground. Dragging Canoe's cryptic statement implies that some kind of conflict was associated with the region Henderson was purchasing. But whether it represented the reciting of historical fact or a warning for the future is difficult to evaluate on the basis of the phrase alone.

Dragging Canoe certainly could have been referring to the struggle for land between the settlers and the Indians, with the fighting on the Kentucky frontier that followed a few years later lending credence to his description. But in fact, the Euro-American land speculators and settlers interpreted Dragging Canoe's statement to mean that a conflict over Kentucky existed *between Indian groups,* and that the land was not claimed by anyone. This interpretation suited their needs very well. If Kentucky was not Indian territory, land speculators could justify selling this "free" land to settlers. If Kentucky was not Indian territory, settlers had every right to move into the area and establish farms.

So, the Myth of the Dark and Bloody Ground would have us believe that before Euro-American settlement, native peoples never lived permanently in Kentucky; instead they only hunted here and fought over this land. This myth has been and continues to be perpetuated in children's books, in scholarly books and journals, in histories, in magazines, and in textbooks. Note Thomas D. Clark's brief reference to native peoples in the newly published (1992) Kentucky Encyclopedia: "None actually occupied with any permanence the present geographical pale of Kentucky, although Indians from both north and south visited the region on hunting and warring expeditions;" or the statement in a widely-used middle-school textbook, The Kentucky Story, by Joseph O. Van Hook, last revised in 1974: "Kentucky was without Indian inhabitants other than roaming bands of hunters and warriors...(for) at least a century and it might have been nearer two centuries [before the settlers arrived]." The Dark and Bloody Ground is mentioned no less than five times in the 1992 high school textbook, Our Kentucky: A Study of the Bluegrass State, with the highlighted passage from Robert Penn Warren's book, World Enough and Time, focusing specifically on the Myth:

> In the days before the white man came, the Indians called the land of Kentucky the Dark and Bloody Ground...The Indians came here to fight and to hunt, but they did not come here to live. It was a holy land, it was a land of mystery, and they trod the soil lightly when they came. They could not live here, for the gods lived here.

As outlined in Henderson's article, "Dispelling the Myth...," this myth has persisted for a number of reasons: differences between Euro-American and aboriginal conceptions of land ownership; distinctions the settlers perceived between historic American Indian culture and the remains left by prehistoric Indian groups; the benefit land speculators derived from encouragement of this myth; the violent conflicts that took place between Indians and Euro-American settlers during the 1770s and 1780s; and the myth's early codification by widely read author and land speculator John Filson. These reasons are discussed below.

To the settlers, land was personal property, like jewelry or clothing. And like any possession, they felt it could be bought and sold. To the American Indians, as with many traditional cultures all over the world, land could be used, but it could not be owned by anyone. Land was controlled by or considered the territory of a particular kin-group, lineage, or village, not an individual. Other groups could negotiate for the *use* of the land, but no group could *own* it. When the settlers "bought" land, then, they were buying it for their personal, exclusive use. When the Indians "sold" land, though, it was access to the land or use-rights they were selling, but not the land itself. Land was available for all to use because, from the Indians' point of view, the land could not be owned. The settlers interpreted this to mean that "no one" owned the land and, therefore, the Indians had no claim on it. In other words, it was free for the taking.

The real cultural differences that existed between the prehistoric and historic American Indian groups were also factors that served to support the myth. The settlers who arrived in central Kentucky in the 1770s recognized that the Indians they encountered did not build mounds. Because they believed that the Indians they knew lacked the technology and cultural sophistication to build mounds, they concluded that other people, a "vanished race" called the Moundbuilders, had to have built the mounds and earthworks they saw. Thus, the settlers did not consider the Indians they knew to be related to these prehistoric people. The native peoples they met face to face must be newcomers, too, and so the Euro-Americans considered their own claims as newcomers to the land as valid as the Indians' claims.

The pervasiveness of the Dark and Bloody Ground Myth and tenacity with which it has survived to the present also may be due, in part, to the violent late-eighteenth-century settler-Indian conflicts, and John Filson's early publication of The Discovery, Settlement, and Present State of Kentucke. At the height of Indian raids, Euro-American settlers undoubtedly considered that a dark cloud had passed over Kentucky, turning it into a bloody ground. Filson's book, published in 1784, followed on the heels of this fighting. It twice refers to Kentucky by its violent, supposedly Indian name: as the "Dark and Bloody Ground" and as "an object of contention, a theatre of war, from which it was properly denominated the Bloody-Grounds." Filson's other proposed native term

for Kentucky was "Middle Ground," though of course "Dark and Bloody Ground," the more sensational label, is the one that has persisted.

There is no single accepted etymology for the name Kentucky (Kentucke, Cantucky). One of the first recorded uses of the name occurs in a deposition describing the capture of a group of traders by Indians allied to the French on January 26, 1753 at a place called "Kentucky." This "Kentucky" was described as being located south of the Allegheny River about 150 miles from the Shawnee town situated at the confluence of the Scioto and Ohio rivers. Various authors offer a number of other opinions concerning the word's origin: an Iroquois word (Kentake) meaning meadow land; a Wyandot word (Ken-tah-teh) meaning the land of tomorrow; an Algonquian term (kin-athiki) referring to a river bottom; a Shawnee word meaning head of a river. The name does not mean "dark and bloody ground" in any language.

Kentucky had been permanently inhabited for a very long time before the arrival of the non-native peoples of European and African descent. Native peoples were the first Kentuckians, arriving in the Ohio Valley more than 12,000 years ago. From these earliest migratory hunters late in the Ice Age, to the hunters and gatherers, to the moundbuilding part-time gardeners who traded with distant peoples for copper and marine shell, to, finally, the farmers whose permanent villages contained upwards of 1,000 inhabitants or more, research at archaeological sites in every county in the Commonwealth has recovered the artifacts of Kentucky's past peoples. The places across Kentucky where thousands of chipped stone projectile points (what we commonly call "arrowheads", though this term really only applies to certain stone points manufactured after about A.D. 700, when native peoples developed the bow and arrow) have been recovered were not the scenes of great battles, but rather the locations of Indian camps and villages.

The native occupation of most of Kentucky from A.D. 1540-1795 is referred to by various names. Late Prehistoric Period, Protohistoric Period, Frontier Period, and Contact Period are all labels applied to the time during which native peoples came into contact with Euro-Americans. We know quite a bit about native ways of life during the early part of this time span, especially in northern and northeastern Kentucky. Native peoples were farmers who lived in large villages in the summer. In the winter, most able-bodied people moved to smaller hunting camps. These people buried brass and copper ornaments with their dead, ornaments that were made from recycled kettles traded from groups living south of Kentucky. The appearance of these ornaments in the graves of Kentucky's native peoples sometime between A.D. 1540 and A.D. 1650/1680 documents indirect contact with Euro-Americans.

Less is known about the period from A.D. 1650/1680 to the mid-1700s, however. The native occupation of most of Kentucky during this later time is

poorly understood due to a number of reasons. Extensive archaeological research has not been conducted for this time, so little information is available about native lifeways prior to the direct Euro-American contact that occurred when the region west of the Appalachian Mountains and east of the Mississippi River was explored. Explorers did not visit Kentucky's native peoples during this period as they did groups in the Southeast or Northeast. Or, if they did, they left no descriptions of their journeys.

Documents that do describe native peoples in central Kentucky begin to appear in the mid-1700s (somewhat earlier in the western part of the state), but this is after Euro-American diseases had reduced native populations by over half, disrupting their pre-contact ways of life. Some native groups completely disappeared due to these diseases, while the survivors of other groups joined together to form new societies. This social and cultural disruption makes it difficult in Kentucky to associate prehistoric peoples with historical tribal groups. While it is true, then, that few or no permanent Indian settlements remained in central Kentucky when Euro-American settlers arrived there in the 1770s, Indian communities may have remained in more remote or less-traveled areas of the state, such as the mountains of eastern Kentucky, long after Indian communities in more hospitable areas had been abandoned.

Folklore and legend describe an Indian village known as Eskippakithiki (Es-skip-peh-keh-theeee-keeee) at Indian Old Fields in southeastern Clark County in the early 1700s. It was touted as the "last" Indian village of Kentucky by Lucien Beckner and described as the single, relatively permanent Indian settlement in historic times in The Kentucky Encyclopedia. In fact, when the evidence is examined, much confusion surrounds the existence of this settlement. Recently archaeologists have reviewed colonial documents, pioneer records, folklore, and archaeological data concerning this settlement (see Henderson, Jobe, and Turnbow).

Many theories of Indian occupation in the Indian Old Fields area have been found to be in error. No eye-witness documents are known that actually describe an Indian community or its inhabitants at Indian Old Fields. Two stories about the trading experiences of John Finley (an Irish fur trader of the late 1700s), one around a "Little Pict Town" somewhere between the Great Lakes and the Kentucky River in 1752-1753, and one in Indian Old Fields in 1767, have been confused by later speculations. The relationship between this "Little Pict Town" and Eskippakithiki is uncertain, and in fact, these names may actually refer to two different towns. Pioneer data have been greatly altered as stories have been passed down by word of mouth and into the realm of folklore.

A "fort" identified in some sources as part of Eskippakithiki is not a fort at all, but is rather a small prehistoric earthwork probably dating between 150 B.C. and A.D. 400, based on archaeological evaluation of the site. No firm

archaeological evidence of an historic period Indian village has been identified at Indian Old Fields, but a circular Indian village that is clearly prehistoric is present in this locale. Therefore, due to the vagueness of the historic documents, unreliable folklore, and speculation, it is only safe to say that a great deal of confusion exists about an historic period Indian village in southeastern Clark County that may have been called Eskippakithiki. Its existence must continue to be viewed cautiously until archaeological remains of the village can be documented. The few reliable sources suggest that some type of Indian habitation was present at Indian Old Fields in 1750 or 1751 (not 1718 or 1736 as stated so conclusively by Beckner) but, this village probably was abandoned in 1754.

More information is available about native settlement during the Contact Period along the Ohio River in northern and northeastern Kentucky. In this area, it seems likely that native villages may have been abandoned by the late 1750s, about twenty years before the settlers arrived. Documents from the 1750s and 1760s state that the inhabitants of the Shawnee town at the former confluence of the Scioto and Ohio rivers in northeastern Kentucky (called Lower Shawneetown by the English traders) moved their permanent summer village north to the Plains on the Scioto in what is now Ohio in 1758, after the English captured Fort Duquesne (where Pittsburgh now stands). The town's inhabitants moved because of fear of reprisals from the English, against whom they had been allied with the French in the Seven Years' (French and Indian) War.

The documents indicate that native peoples continued to live in the Scioto/Ohio confluence area in small groups during the winter until the early 1760s. Ohio Valley peoples dispersed from their villages into smaller, family groups in the fall and winter to collect nuts and hunt. If settlers arrived in the fall or winter during the 1760s, they probably would have encountered small groups of Indians, primarily men, women, and older children, at the winter camps; the aged, infirm, or very young with their mothers would have remained in the villages north of the Ohio River. The native practice of establishing winter hunting camps could have led to the interpretation that indigenous groups only hunted in Kentucky.

Indians at the Scioto/Ohio river confluence area are mentioned in the documents again between 1773 and 1794, the years when the arrival of Euro-Americans west of the Appalachians was beginning to swell beyond its earlier trickle. Indian raiding parties of men on horseback are described crossing at this spot, and it was the scene of frequent attacks on settlers. No mention is made of occupied villages or camps in the area, however.

Our best evidence indicates that by the time of major Euro-American settlement in central Kentucky, there were few or no permanent Indian villages in the eastern half of the state. We do not have a clear picture of indigenous

settlement of the western half of the state. The lack of written evidence documenting Indian villages in Kentucky at the time of the settlers' arrival, then, contributed to the development of the Myth. By examining the archaeological record, however, we know that Kentucky was the permanent home for many native groups for over 12,000 years.

Given the factors reviewed here, it is not surprising that Dragging Canoe's statement about a "dark and bloody ground" was interpreted to mean Indians had never owned, bought, or lived in, but had only fought over, the land south of the Ohio River. Certainly what we know about the nature of American Indian use and occupancy of this region witnessed by the earliest settlers bears this out. The fact that the settlers saw no permanent Indian villages in Kentucky when they arrived, combined with the very different worldviews of the settlers and the Indians, the rush to profit from land speculation, and the realities of the conflicts that would shortly follow, resulted in the Myth of the Dark and Bloody Ground.

The myth of the Dark and Bloody Ground has served Kentucky well. Early Kentucky land speculators had everything to gain and nothing to lose by perpetuating it. Without permanent native inhabitants and unclaimed by any native groups, a dark and bloody Kentucky, contested by many, meant that the land was empty, open, and free to whoever got there first. It was the perfect advertising slogan, and it worked remarkably well.

Kentucky passed from a "wilderness" to a "civilized" state (indeed to a fully recognized "state") in less than twenty years (1773-1792), with the bulk of Euro-American settlement, as evidenced by the construction of frontier "stations" in central Kentucky, occurring over an even shorter period. These Euro-American families and their black slaves, flooding into "Kentucke" from North Carolina, Virginia, and Pennsylvania to start a new life, were invaders and conquerors, though our history books, understandably, do not portray them as such. Today the Myth remains a convenient, though by now probably unconscious, rationalization for the theft of American Indian lands in the state.

2. The Myth of the Savage Indian/Child of Nature

Another myth that has been accepted throughout much of Kentucky's history, and for that matter, for natives throughout North America, is that the American Indians encountered by the first settlers were savage, dull, and brutish, and that they lived a marginal, "primitive" existence. This stereotype makes it difficult for many people to believe that Kentucky's native people or their ancestors are worthy of our cultural respect.

The native peoples who lived in central and eastern Kentucky when the first settlers appeared (or who had until only recently lived in this region) were village

farmers. They followed a way of life much like that of their neighbors throughout the middle Ohio River valley. In the summer, they lived in permanent villages scattered along the major rivers and streams. Their fields of corn, beans, squash, and tobacco surrounded their villages. The men hunted in the surrounding woodlands. The women tended the crops and collected nuts and wild plants for food and medicine. Archaeologists estimate that corn made up about 60% of their diet. In the winter, the able-bodied moved to small hunting camps, where nuts were processed for oil and animals were processed for meat, hides, and bone tools and ornaments. These people used bows and arrows; made pottery vessels of different sizes and shapes; wove fabrics; participated in long-distance trade with native groups to the north and south, exchanging marine shells, pipestone, and probably salt, among other things; and had a rich ceremonial life.

Their way of life differed greatly from that of the Euro-Americans, and the judgment of the newcomers can be attributed, in part, to fear of an unknown enemy. In the ensuing conflict between the settlers and indigenous peoples in frontier Kentucky, cruelty and deception were practiced by both sides. By referring to the native peoples as savages, the settlers may have been attempting to justify their own behavior: a tendency to brutalize the enemy, which is common to all peoples engaged in war.

It is true that American Indian technology was neither as advanced nor as complex as that of the Euro-Americans. In Europe, the production and distribution of the tools and articles needed for life was a complex process, frequently involving many different people. Individuals were often engaged in specialized tasks. Some goods were mass-produced. Laborers living in large cities did not grow and hunt their own food. Money ensured that goods changed hands. In native Kentucky, tools and other goods often were produced by the same individual from start to finish: a native flintknapper collected his own raw materials and then chipped his tools out of the rocks he had collected. Tools and other goods were usually used by the person who produced them or by a family member, or they were exchanged for goods made by an acquaintance. Everyone was involved in growing and hunting for food.

This difference in technology does not justify describing native ways of life as inferior. To do so is to fall victim to ethnocentrism (the belief that one's own culture, race, or nation is superior to all others). As anthropologist Claude Levi-Strauss noted, "a primitive people is not a backward or retarded people; indeed it may possess a genius for invention or action that leaves the achievements of civilized peoples far behind." In other words, "simple" does not imply "simple-minded."

A corollary myth to the "Savage Indian" is the "Child of Nature" myth that American Indians are innocent victims of white depravity, of the "manifest

destiny" of a callous, land-hungry civilization. Native peoples are praised as examples of humans living in harmony with the environment. But this is reverse ethnocentrism and a stereotype that also denies their humanity. It is no more true of Native Americans than of any other pre-industrial people. Alvin Josephy points out in his study of American Indian heritage that Native Americans "were, and are, all kinds of real, living persons like any others," and included "peace-loving wise men, mothers who cried for the safety of their children, young men who sang songs of love and courted maidens, dullards, statesmen, cowards, and patriots."

It is important to recognize ethnocentrism and the myths and stereotypes to which it can make us fall prey. All human groups are complex, and none should be judged "more advanced" or "more backward" than another. Because we do not understand a peoples' customs is no reason to consider them inferior. It is more appropriate to evaluate all societies on their own terms (cultural relativism). Each cultural group, be it the Mongols in Asia, the Nuer in Africa, or the indigenous peoples of Kentucky, has its own notion of justice, follows its own rules for the education of its children, and has its own ways of explaining the natural forces that affect its lives. Each group finds ways to adapt to its own environment and to express that which makes it human.

3. The Myth of the Moundbuilders

Two hundred years ago, Euro-Americans could not believe that the American Indians they met and interacted with had ever possessed the engineering and administrative skills needed to build mounds. Similarly, they did not think that American Indians could have been responsible for the finely-crafted objects recovered from early mound excavations. To explain the mounds, Euro-Americans postulated the existence of a unified and civilized race, far superior to the Indians, who had once ruled an empire in the Ohio Valley. This is the Myth of the Moundbuilders. Today, we know that the great earthen mounds in Kentucky and elsewhere in the Woodlands east of the Mississippi River were constructed by the ancestors of the American Indians the settlers encountered.

In Kentucky, mounds began to be built around 500-400 B.C. The large, conical earthen burial mounds of the Adena people are still scattered across the central Kentucky landscape. So, too, are their earthworks and sacred circles. Later, around A.D. 900, the Mississippian cultures of western and southern Kentucky began to construct large, flat-topped earthen mounds which were used as platforms for their temples. In central and eastern Kentucky, the Fort Ancient people built low earthen burial mounds between A.D. 1200 and A.D. 1400.

During the 1800s, proof of the supposed existence of the Moundbuilders was offered to the public by antiquarians and by respected scientists. The story was

accepted without question. In 1847, Kentucky historian Lewis Collins wrote "Monuments of deep interest but as yet imperfectly investigated speak in language not to be mistaken of a race of men which preceded the rude tribes encountered by Boone...[and which] far surpassed [them] in arts, in civilization, and in knowledge."

The origins of the Moundbuilders were unknown, although at various times they were suggested to be Phoenicians or Egyptians wandering far from home, survivors of sunken Atlantis, descendants of the lost tribes of Israel, Welsh adventurers, Chinese, Sumerians, Romans, or Danes. In Kentucky, "Welsh Indians" especially seem to be the "group of choice" in folklore and legend when discussing the identity of the Moundbuilders. Whatever the case, the civilization they built in the American wilderness was, according to the myth, "swept away by an invasion of copper-hued huns."

The Moundbuilder myth reinforced the dominant nineteenth century stereotype of the prehistoric native peoples as "bloodthirsty savages." Indeed, it has been suggested that belief in the Moundbuilder myth persisted as long as it did because, in part, it served to justify the Euro-Americans' treatment of native peoples. The more primitive the Indians were thought to be, the easier it apparently was to justify their destruction or displacement. American Indians had annihilated the great Moundbuilders, so they deserved their fate at the hands of the civilized inheritors of the Moundbuilders' former empire.

Another explanation for the popularity of the Moundbuilder myth may lie in the development of America's national identity. The standard historical interpretation holds that the insecure Americans in the nation's infancy (1800-1825) were actively seeking in their art, literature, and music, and in their political operations and scientific endeavors, ways in which to present themselves superior to the established nations of Europe. The myth of the Moundbuilders provided the infant United States with a grand and glamorous past, comparable to any of the ancient civilizations.

Cyrus Thomas and Frederic Ward Putnam were responsible for demolishing the Moundbuilder myth in the late 1800s. They were able to do this as a result of extensive excavations at mounds in the Ohio Valley. The data they recovered convinced these men that the connections between the mounds cultures and American Indians were clear. Thomas also concluded that different tribal groups had built different mounds.

If more attention had been paid to the first Europeans to visit the American mounds, as Robert Silverberg points out in his study of the Moundbuilders, the myth "might never have gained headway." Several accounts by Spanish explorers report temple mound-building cultures in the southeastern United States in the sixteenth century; in the early eighteenth century the French documented the

culture of the Natchez, a tribe with cultural characteristics much like those of the prehistoric Mississippian culture. Unfortunately, by the time the descendants of the English explorers focused on the mounds, native peoples living east of the Mississippi River were not living according to the old ways. Their cultures had been destroyed.

4. The Myth of a Shared Way of Life

The "American Indian" brings to mind an image that has been fashioned by radio, television, and the movies: the tall, lithe, young bronze man dressed in deerskin leggings and shirt, with long braided hair, armed with weapons ready to fight atop his spotted pony; or the stooped, white-haired old man who speaks wisdom in images from the accumulated experiences of centuries of tribal traditions and his own warrior days.

This myth was perpetuated in literature and the visual arts. Robert F. Berkhofer has outlined how Henry Wadsworth Longfellow's poem "The Song of Hiawatha" and James Fenimore Cooper's Leatherstocking Tales helped create an image of the American Indian that confused one group with another in customs, names, and languages. After the Civil War, the American Indian of the dime novel, wild west shows, and popular art became the generic tribesman of the Plains, the quintessential Native American. With the coming of motion pictures and television, Berkhofer shows how western Indian stereotypes were vividly preserved, even in the supposedly more sensitive films of the 1960s and 1970s.

According to this stereotype (or some version of it), all American Indians hunted buffalo, carved totem poles, lived in tipis, ate corn, built mounds, and warred constantly. Kentucky's native peoples, the myth suggests, were no different than groups who lived originally in Kansas, New York, Georgia, Arizona, or Oregon. This stereotype is incorrect, mixing together characteristics of hundreds of Native American groups across time and space into a "generic" American Indian culture. It is analogous to describing all Europeans as people who drink beer, grow grapes, live in castles, eat pasta, attend bullfights, and war constantly. In truth, there were and are many Native American Indian ways of life, as diverse in Kentucky throughout prehistory as they are diverse in North America throughout history.

The native peoples living in Kentucky during the Contact period are considered collectively as Woodlands people. Their ways of life contrast sharply with those of the apartment dwelling farmers of the arid Southwest, the coastal fishing groups of the Pacific Northwest, and the nomadic tribes of the Great Plains.

While it is true that groups living in the same region often had similar lifestyles, this was not always true. Consider the Zuni and Navajo at contact: both groups lived in what is now the southwestern United States, but their customs and languages differed. The Zuni were settled farmers, while the Navajo were pastoral nomads. The Zuni spoke Zuni and the Navajos spoke an Athabascan language. By examining each element of this stereotype (hunting buffalo, carving totem poles, living in tipis, eating corn, building mounds, and warring constantly), we can show the fallacy of this myth.

Buffalo Hunting:

Hunting practices and the animals taken reflect the available animal resources and the nature of the cultures doing the hunting. Extensive buffalo herds lived on the Great Plains and represented an important source of food and materials of daily life for both nomadic and village-dwelling Plains Indians groups. Prior to the late 1600s, these Indian groups hunted buffalo only on foot. It was only after they learned to ride the horses the Spanish brought to the Southwest, and shoot the guns the traders brought from the Northeast, that the native Plains peoples rode to the hunt as depicted in the recent movie "Dances With Wolves". The quintessential Native American, the mounted Indian buffalo hunter of the Great Plains, appeared around the late 1700s and lasted only until the late 1800s: all in all, only 100 years.

Buffalo did move into the Kentucky Woodlands just prior to A.D. 1650, but they did not live in enormous herds. Woodlands peoples hunted the major land animals that lived in their homelands, like those of the Plains. But east of the Mississippi, these were deer, bear, and elk. When the buffalo arrived from the West, native peoples added buffalo to their diet, but it did not become their major food resource.

Carving Totem Poles:

American Indian peoples living along the Pacific coast in what is now the northwestern United States and western Canada carved totem poles from cedar during contact times. Kentucky's native people did not carve totem poles, though throughout prehistory they were woodcarvers. The preserved remains of wooden utensils and figurines have been recovered by archaeologists from Kentucky's dry rockshelters and caves.

Living in Tipis:

Tipis are a form of dwelling developed by native groups living on the Great Plains of North America. Easily moveable, tipis were the perfect form of housing for these nomadic tribes, enabling them to follow their main food source, the buffalo herds. In contrast, the Iroquois in the Northeast lived in longhouses, permanent dwellings constructed of wooden poles and bark, while the Zuni in the Southwest lived in apartment-style houses built of sun-baked adobe bricks.

These latter two groups were farming peoples, whose ways of life enabled them to build and live in permanent houses.

Kentucky's native peoples did not build tipis. The dwellings of Kentucky's Archaic hunter-gatherers were easily moveable, like the tipis of the Great Plains peoples. This reflected their builders' transient lifestyle. But others, like those of the later village farmers, were permanent, consisting of frameworks of wooden poles and branches covered in either skins, bark, or a mixture of grasses and mud. Dwelling sizes varied, and some were built in shallow depressions dug into the ground. Cave entrances and rockshelters also were used as shelter by Kentucky's native peoples.

Eating Corn:

Native peoples in North America began to eat corn after it was introduced from Mexico. Groups living in the Southwest began growing corn sooner (around 1500 B.C.) than those in the Midwest, Southeast, and Northeast. Some groups, like the Mandan on the Plains, the Zuni in the Southwest, and the Iroquois in the Northeast, grew and ate corn as a major dietary component. Others traded for corn from native farmers but did not grow it themselves, like the Sioux and the Navajo. Still others did not eat corn at all, like the Ute. Corn became a major food source for Kentucky's native inhabitants around A.D. 900. Therefore, only Kentucky's village farming peoples ate corn. Their immediate ancestors grew squash and sunflower in small garden plots, and Kentucky's native peoples in even earlier times gathered plants and nuts, but they did not eat corn.

Building Mounds:

At different times during their long history, native peoples of the Woodlands in North America built mounds. Some of the earliest in Kentucky were built around 500-400 B.C. They built mounds for many reasons, and the size, shape, and location of the mounds on the landscape reflect this variety. Large, conical earthen mounds on high ridgetops or smaller, lower earthen mounds on broad ridges functioned as cemeteries. Large flat-topped earthen mounds served as the platforms for temples and chiefs' houses. Mounds built in geometric shapes that enclosed sacred spaces or mounds built in the shape of animal figures served ceremonial purposes.

Warring Constantly:

The image of the American Indian constantly "at war" is one that was born after the appearance of Euro-Americans in North America. This characterization should not be surprising, given the fact that native peoples' lands and resources were constantly threatened by Euro-American land speculators, settlers, miners, and railroad magnates.

But to stereotype native peoples as "warlike" is to single them out as somehow different from other cultural groups. The native peoples of North

America resolved disputes that arose between groups through diplomacy or conflict. These are the same approaches used by all cultures to resolve disputes. Their conflicts took the form of feuding or raiding, carried out within the context of intra- or intervillage competition for resources. Often looted goods, not lives, were the targets of the raids. These are the same forms of conflict non-industrialized or traditional peoples all over the world rely upon when diplomacy fails. Technically, war occurs only when a sufficiently developed technology (usually based on advanced farming or industrialization) supports a centralized government and a specialized military force.

Thus, "war" began in North America when various European immigrant groups (the British, the French, the Spanish) warred with each other for control of the continent. Men of many Native American groups allied themselves with the military forces of each of these countries at various times. Scalping, a practice native groups engaged in before the arrival of Europeans, was incorporated into the fighting on the frontier. Its frequency of occurrence increased as Europeans encouraged and offered rewards for its practice. Consider the violence in America today, the fighting and ethnic "cleansing" in the former Yugoslavia, the conflicts in the Middle East, and then decide which cultures should be considered "warlike".

Why It Is Important to Teach Against Stereotypes

Stereotypes of any kind, be they racial, cultural, or sexual, depersonalize and dehumanize individuals. When we stereotype, we often respond to people according to their labels and not their humanness. As world citizens in the 21st century, there will no room for stereotypes or ethnocentrism: students will need to be able to recognize, appreciate, and respect the remarkable variety of human cultures, past and present. By learning about the diversity of native peoples who once lived in Kentucky, and not the stereotypes and myths about them, students will appreciate Kentucky's rich cultural heritage and act to preserve it.

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Classroom Activities
prepared by Kentucky educators

Myth #1: The Myth of the Dark and Bloody Ground

2.21: Students observe, analyze, and interpret human behavior to acquire a better understanding of self, others, and human relationships.

Using today's concept of a travel agency, the class will become travel agents for frontier Kentucky. Discuss strategies for attracting settlers and their families to this new frontier. Develop ad campaigns (slogans, posters, incentive packages, travel brochures, etc.) based on the myth that Indians did not live in Kentucky. If you knew your clients were concerned about Indian attacks on the frontier, what kind of image would you choose for a poster to encourage them to move there? Develop a television ad and video tape it or dramatize it for the class. Discuss the impact your advertising campaign will have upon Native Americans. **(PE, OE, P--Middle, High)**

A related follow-up activity: Have students find examples in commercial advertising or marketing strategies that present negativisms or suggest falsehoods about competing companies or products. **(PE--Middle)**

You and your pioneer family have just moved to Kentucky to settle. Before coming to Kentucky, you heard that the Indians only used Kentucky as a hunting ground and that they were vicious savages. After living in Kentucky for some months, you have learned that this is not true. Write a letter to a friend in Virginia explaining what you have learned that has shown these reports to be untrue. Give examples to try to convince your friend not to believe everything they hear. **(P--Elementary)**

2.14: Students recognize issues of justice, equality, responsibility, choice, and freedom and apply these democratic principles to real-life situations. 6.1: Students address situations from multiple perspectives and produce presentations or products that demonstrate a broad understanding.

Discuss the Native American concept of land use and stewardship versus Euro-American land ownership. Examine the language of one of the treaties the U. S. government entered into with Indian nations to purchase their traditional tribal land, using one of the many published treaties (Kappler is one resource). Divide the class into two treaty parties: 1) Indian chiefs and elders and 2) representatives of the U. S. government and/or private land companies. Each treaty party should develop lists of why the land is important to them (considering their own cultural perspective) as well as strategies for achieving

their own goals during the treaty council meeting, the culminating event for the assignment. At the treaty council meeting, both parties will debate and try to negotiate a treaty. How will the "Indians" explain their reasons for wanting to remain on their ancestral lands and their inability to sell something they believe no one can "own?" What incentives will the "government" offer to the "Indians?" **(PE, OE--Middle, High)**

Research accounts in history textbooks regarding the sale of Manhattan Island. Are these accounts based on the Euro-American point of view, or is the Native American viewpoint also considered? Find jokes or cartoons depicting this event. Consider different perspectives regarding land ownership, but also consider other differences in cultural perspective. Native Americans usually preferred certain goods over European money when trading with European partners. Discuss why this was the case. How does this difference in perspective affect your interpretation of the Manhattan Island land sale? **(PE, OE--Middle, High)**

Students will produce a portfolio of reflective pieces focusing on the Dark and Bloody Ground Myth. This portfolio must include the following items:

1. A piece that shows the recorded information about the native peoples of Kentucky prior to the 1770s.
2. A piece that discusses the rationalization of the Euro-Americans for using the Dark and Bloody Ground concept and other stereotypes for imperialistic gain.
3. A piece that shows your thoughts about the Native American concept of land use versus Euro-American land ownership.

(P--High)

Write an *accurate* history of the native peoples of Kentucky prior to the 1770s for the use of 4th graders studying Kentucky's history. Be sure to emphasis myth versus reality. Include visuals to help the 4th graders' understand the history. **(P--High)**

Put the March 16, 1775 Treaty at Sycamore Shoals on trial. Delegate the positions of judge, jury, lawyers for the Cherokee Nation, and lawyers for the Transylvania Company. Research each position, taking their cultural point of view. **(PE--High)**

Read portions from the actual book, <u>The Discovery, Settlement, and Present State of Kentucke</u> by John Filson. Rewrite these portions using what we know

about Native Americans to correct any of Filson's misrepresentations. (P--High)

6.1: Students address situations from multiple perspectives and produce presentations or products that demonstrate a broad understanding.

You have learned that Native Americans looked at the land in a very different way than European settlers. Suppose you were a Native American child. Write a poem describing how you view the land. For example, your poem might talk about ownership of the land, or the importance of the land to you and your tribe for food, spiritual strength, and connection to your ancestors. **(P--Elementary, Middle)**

Myth #2: The Myth of the Savage Indian/Child of Nature

2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.

Discuss the myth of the savage Indian/child of nature. How is reality different from the myth? Define ethnocentrism and cultural relativism and relate those terms to today's world. Students will create a rap song that relates personal knowledge of ethnocentrism and cultural relativism in today's world. It will include the myth of the savage Indian/child of nature and the reality of Kentucky's native peoples. **(OE, PE, P--High)**

Read a book about another culture, past or present, that touches on the issue of ethnocentrism. Develop a comparative list of problems, issues, and concerns faced by the characters in that book and the native peoples of Kentucky. Write a piece that proposes ways to combat the prevalence of the myth of the savage Indian/child of nature. **(P--High)**

Myth #3: The Myth of the Moundbuilders

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities. 2.26: Students recognize differences and commonalties in human experience through their productions, performances, or interpretations.

Developing cultural appreciation through accurate information is a primary way to end stereotyping. Research the rich Indian cultures of mound builders in North America and Kentucky (for example, the Adena/Hopewell, Mississippian, and Fort Ancient groups). Create an exhibit or a video program about their societies using conceptual images of their camps, villages, and towns. How and why were the mounds built? What kind of planning and engineering would have been required to build these mounds? How long and with how many people would it have taken? How large were the communities and what activities took place there? What were the social, religious, political, and economic characteristics of these cultures? **(PE, OE, P--Middle, High)**

Discuss other stereotypes in our society today. Develop fact-finding projects that may lead to dispelling other cultural myths. **(PE, OE, P--Middle, High)**

Who built the mounds in Kentucky? Discuss why the myth of the Moundbuilders was so prevalent and persistent. Students will produce a skit which demonstrates cultural appreciation for the Moundbuilders of Kentucky. It should include information about the peoples who really built the mounds, how and why the negative myth was perpetuated, and why it is important to understand these cultures today. **(OE, PE--Middle, High)**

Compare the influence of the natural and cultural environment on the Moundbuilders with that of burial customs today. How and why were the mounds built? How was their culture reflected in this practice? What are the typical burial customs in our society today? How does this reflect *our* culture? our environment? **(OE--High)**

Myth #4: The Myth of a Shared Way of Life

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment. 2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

Beginning with a map of the main Native American cultural regions (Northeast and Southeast Woodlands, Great Plains, Southwest, etc.), research the physical environments of each region and create exhibits (graphic maps, illustrations, text labels) describing the climate, landscape, and natural resources. Using books and museum catalogues that categorize products of material culture (household items, tools, arts, clothing, architecture, etc.) by regions, make lists of traditional art/craft/technology forms that utilize natural resources from the culture area. Discuss how available resources influence material culture, e.g., Which cultural regions emphasize wood in their technologies and creations? Why? Does the presence of certain traditions (basketmaking, pottery, scrimshaw...) relate to the availability of natural materials?

Create a class Native American "museum" featuring illustrations of various traditional objects of art/craft/technology. Create interpretive labels to accompany each and exhibit them in areas defined by the different geographic regions. Invite other classes to tours of the "museum" led by student guides. **(PE, OE, P--Middle, High)**

Create one overall regional map that includes symbols for each primary natural resource (wood, shells, livestock/wool, ivory, buffalo, etc.) and symbols of one or two principal uses of that resource for each region (e.g., a mask, a basket, a rug). **(PE, PMiddle)**

Provide students with a map of Native American cultural regions showing symbols of key natural resources (those used in material culture) in each region. Divide students into cooperative learning groups. Instruct students to study the map and discuss the availability of the various natural resources with the members of their group. Why are some resources plentiful in some regions but not in others? How do these resources affect the objects made by the people there? How does climate affect resources? After their discussion, ask students to create a chart showing cultural regions and the natural resources available. The chart should also show products created from these materials in each region. **(PE, OE, P--Elementary, Middle)**

Research architectural traditions in different cultural regions and select unique and varied traditional houses from diverse peoples (e.g., Inuit igloo, Kwakiutl plank house, Hopi pueblo, Lakota tipi, Seminole chickee). Create illustrations or assemble photographs of each architectural type. Discuss how natural materials are used and how adaptations to use or climate are reflected in the designs. Discuss how changes in available materials or lifeways cause traditional designs to be changed, e.g., What happened to the tipi after the decimation of the buffalo? How did Euro-American contact affect traditional architecture? **(PE, OE, P--Middle, High)**

Discuss the Myth of the Shared Way of Life. Compare and contrast the native peoples of Kentucky with other Native Americans in the following areas: buffalo hunting, carving totem poles, living in tipis, eating corn, building mounds, and warring constantly. Make a chart illustrating these cultural comparisons. **(OE, P--Middle, High)**

Pretend you are one of the native peoples of Kentucky prior to 1750. Write a letter to a friend in another Native American culture describing your way of life. **(P--Middle, High)**

2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.
2.17: Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world.
2.21: Students observe, analyze, and interpret human behaviors to acquire a better understanding of self, others, and human relationships.

Discuss why it is important to learn about stereotypes. Locate and watch a television show or movie that perpetuates stereotypes of the American Indian. Produce a video that uses the same premise as the show or movie but corrects the misconceptions of the native people it portrays. **(OE, PE, P--High)**

Collect news articles that deal with the issues surrounding the use of Indian mascots for sports teams. Analyze the viewpoints presented. Stage a debate between those who see no harm in using Indian mascots and those who find it offensive. **(OE, PE--High)**

Watch the movie "Dances with Wolves." Describe in a written piece the differences between the way Native Americans are portrayed in the movie and the lifeways of Kentucky's native peoples. Reflect how the Native Americans in the movie were depersonalized and dehumanized. Is this true of our treatment of Kentucky's native peoples? How could this be changed? **(OE, P--High)**

Why It Is Important to Teach Against Stereotypes: Further Classroom Activities

Collect popular images of Native Americans from print advertising in old magazines, children's books that feature Indian characters, school/sports team mascots, etc. Make a collage from photocopies of these images. View film portrayals of Native Americans from the past in old westerns, cartoons, or other programs. Discuss the characteristics portrayed in these various forms of media. What effects could these portrayals have on the Native American community? Why is it important to guard against stereotyping? How would you explain these negative images to your children if you were Native American? **(PE, P, OE--Elementary, Middle, High)**

Visit a museum in your area that has exhibits concerning Native American culture. Evaluate the exhibits. Did you find any inaccuracies? Were myths or stereotypes portrayed? Write a piece suggesting how the museum could improve its exhibits. **(PE, P--High)**

Chapter 2

A Teacher's Guide to "Kentucky Before Boone:" A Poster and Booklet About Kentucky's Native Inhabitants[1]

by A. Gwynn Henderson

Introduction

Long before Daniel Boone first set eyes on the "beautiful level" of the Bluegrass on June 7, 1769, the region south of the Ohio River, east of the Mississippi River, and west of the Appalachian Mountains, now known as Kentucky, was home to peoples with a cultural heritage very different from our own. They arrived over 12,000 years ago, and the traces of their lifeways are still scattered across the state. Stone tools and pottery fragments are buried in the earth and plowed up in fields. Great mounds of earth or stone lie in woods and pastures. Accumulations of ash and debris are tucked beneath cliff lines.

These people were the ancestors of the peoples collectively referred to today as American Indians or Native Americans. While they shared many ideas and customs, they were not a single people. They were hunters, foragers, and farmers who spoke different languages and dialects. They viewed their home territory as the center of the universe and saw others as foreigners. Their lives were guided by tradition-bound rules of behavior that focused on family and community more than the individual.

One way to get a sense of their collective history is to learn about the results of archaeological research conducted in the state. Archaeologists break up this long span of time into four periods, which they have termed Paleoindian, Archaic, Woodland, and Late Prehistoric. They define these periods on the basis of distinctive types of artifacts, the surviving materials of these past cultures. Stone projectile points (commonly called arrowheads) and fragments of pottery vessels are the two major types of artifacts used to identify the relative age of archaeological remains. But many other kinds of artifacts made from stone, clay, and bone also are found at the places of their former camps and villages, including the charred remains of plant foods. Under very special conditions, even garments made of plant fibers or leather sandals may be preserved.

Since the 1950s, radiocarbon dating of charred plant and bone remains (a method of determining an absolute date of a previously living thing based on the decay of the radioactive carbon it contains) has enabled archaeologists to determine the ages of the prehistoric periods, which are now known to cover a time span of at least 12,000 years. Other advances in archaeological research have helped characterize each period by the ways in which these peoples carried out their lives: their technologies, dietary habits, settlement patterns, social organization, burial customs, artistic expression, patterns of trade, and ideology.

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[1] The 18½" x 25" poster, "Kentucky Before Boone," and accompanying narrative may be requested by writing the Kentucky Heritage Council, State Historic Preservation Office, 300 Washington Street, Frankfort, KY 40601.

The Kentucky Heritage Council's Kentucky Before Boone poster by Jim A. Railey commemorates the unwritten past of Kentucky's native peoples as recorded through archaeological research, dispelling the myth that they never lived in Kentucky permanently. The poster depicts many aspects of prehistoric lifeways in Kentucky during the four archaeological time periods. The lifeway scenes show native peoples using the tools archaeologists have found at archaeological sites. They also show artist's reconstructions of the camps, villages, and towns of Kentucky's prehistoric inhabitants, based on the results of archaeological research. Some scenes are specific to the period in which they are shown; others portray images of native life that changed little over thousands of years.

Flowing through the collage of lifeway scenes on the poster are artifact timelines that show the major changes in stone projectile points and pottery vessels. The timeline branching to the left represents projectile points and ceramic vessels characteristic of western and southern Kentucky cultures, while the one on the right depicts technological changes for central and eastern Kentucky groups. Archaeological research has shown that people in these two broad regions followed steadily diverging paths of cultural development. Most of the lifeway scenes are not specific to either region. Others do illustrate these differences.

Jim Railey prepared a companion booklet to the poster that explains in broad terms many aspects of Kentucky's native peoples' prehistoric lifeways, but space limitations prevented the inclusion of detailed descriptions of the scenes themselves. This teacher's guide does just that. It provides expanded descriptions of each poster scene and each segment of the artifact timelines, enhancing the educational value of both the poster and the booklet. This guide also provides more information on the archaeological sites that served as the models for the communities reconstructed in the scenes. Important details regarding dress or hairstyle, tools being used in the scenes, raw materials used in home, tool, or ornament manufacture are provided, too, that fill-out the framework provided in the companion booklet. Using the poster, the booklet, and this guide, teachers will be able to develop prehistory units for their classes. The resources listed at the end of this guide provide in-depth information on selected topics described here.

The organization of this study guide follows the arrangement of Railey's companion booklet, with each major time period described as a unit. (Note: the date ranges of the poster are not followed exactly in this guide; date ranges discussed in this guide follow those in The Archaeology of Kentucky: Past Accomplishments and Future Directions, edited by David Pollack). First, five main facts to remember about the period are listed. Then the scenes for the period are discussed under three general headings, Time-specific Scenes, Activity Scenes, and Technology Scenes (the artifact timeline segment of the period), following the order in which they are illustrated in the companion booklet. Also included in this guide are maps of Kentucky for each time period with important sites listed and located, and a time line that illustrates the relative lengths of time covered by each period. This study guide concludes with a consideration of three major themes depicted in the poster.

Paleoindian Period (+12,000-8,000 B.C.)

Early: +12,000-8,500 B.C.
Late: 8,500-8,000 B.C.

Five Main Facts To Remember:

* First people to arrive in Kentucky
* Very few people lived here
* Climate colder and moister than Kentucky's climate today
* Nomadic; hunted now-extinct animals and gathered plant foods
* Only chipped stone spearpoints and other stone tools have survived

Illustrations for the Paleoindian period consist of three time-specific scenes, two activity scenes, and an illustration of fluted points in the technology scene. Paleoindian sites are few in number, but they are found throughout the state (see Map 1 for important ones).

Time-specific Scene 1 - A Paleoindian Group on the Move

The extended family group was the major social group of the period. A Paleoindian family is illustrated here: a man and wife, their son, his wife, and children. They are shown clothed in parka-like garments with boots sewn in such a way that the fur is turned to the inside. This is for protection from the cold subarctic like climate in Kentucky at that time, and especially since this scene is set in the winter (notice there are no leaves on the trees).

Paleoindian groups traveled on foot: there were no large beasts of burden. The division of labor was based on sex, and this scene illustrates this. The women carry the family's possessions on their backs with the help of tumplines (bands passed across the forehead and attached to the load on their back). Two dogs in the lower right of the scene, the family pets, also carry some of the family's possessions.

The men lead the group. Slung across one man's shoulder is a container that holds spearpoints on detachable shafts. The other man has a similar container slung across his shoulder and a tool, possibly a knife, tucked inside his belt.

Time-specific Scene 2 - A Paleoindian Camp

Because Paleoindian peoples were nomadic and traveled in small groups, their houses were built to be easily disassembled and moved and were only large enough for a family to sleep in. In this clearing in the woods, two families have set up camp. Their houses are made of hides sewn together and draped over four large poles. The coverings are secured with stakes at the bottom along the ground. A completely prepared skin and partially prepared skin are slung over the wall of the nearest house.

Inside the opening of the nearest house, a woman is tending a fire. Smoke from it is escaping from both sides of a skin thrown over the front pole. A skin tarp, fastened to the legs of the wooden rack by sinew threaded through holes punched in the tarp corners, covers food in front of

this house. Smaller stick structures, covered and uncovered, are located between the houses. They cover caches of food and can be assembled and disassembled as needed. In front of the second house, a woman is staking a skin to dry, and a man is bringing food - a large leg bone - from the hunt.

This small camp was used only for only a few days. Base camps (like Parrish in Hopkins County), where several families camped together, were larger. At these spots, they would visit relatives, swap news, and meet prospective spouses. Paleoindians placed their camps in the open near streams, marshes, ponds, and game trails, but also in the entrances to caves, like Savage Cave in Logan County.

Time-specific Scene 3 - Skinning a Mastodon

Large Pleistocene (a geological time period) animals, such as mastodons, mammoths, giant bison, horse, musk ox, moose-elk, and caribou, were hunted by the Paleoindians. Hunting was a group effort by several men following a prearranged strategy and using cooperative techniques. Sinkholes and salt licks, such as Big Bone Lick in Boone County and Upper Blue Licks in Harrison County, attracted Paleoindians because the large game animals came to drink from the marshes formed by the sinkholes or to lick the salty earth at the licks.

In this scene, three men have killed a mastodon and are beginning the process of butchering it. They have begun with the soft underbelly, pulling the hide off the animal. Using their sharp stone knives, they will skin it, dismember the bones, and cut off hunks of meat. They might roast and eat some of the meat on the spot, but the rest will be taken back to their camp.

Paleoindians used almost everything a mastodon had to offer. The meat, fat, marrow, blood, and inner organs provided food. Bones and tusks furnished the raw materials for tools (splinters for cutting; larger pieces for knife and scraper handles) and ornaments. The hides and hair furnished clothing and bags.

Activity Scene 1 - Working a Hide With a Stone Scraper

Women prepared hides for use as clothing, shoes, bags, and other items of daily use. Preparing a hide was not an easy task, though, and on the average took about a week to complete.

The women prepared the hides their husbands and sons brought back to them in the work areas outside their houses. Using a chipped stone scraper socketed into a bone or wooden handle, the women first scraped away the flesh on the inside of the hide, taking care not to cut any holes in the skin. Next the hide was soaked for three days in water, after which any remaining flesh was scraped away. To pull the hair away from the hide, the process shown on the poster, the women stretched the hide tightly on a circular wooden frame and tied the frame upright between two wooden posts. Then they scraped the hair away with a stone scraper. This was a long, hard process because the damp skin could be easily ruined with a careless scrape. Next a mixture of deer brains, ashes, and water were worked into the hide until it was softened. The container in the scene, possibly a wooden bowl, holds this mixture. The last step is to smoke the hide over a

fire so that it will stay soft when it gets wet.

Activity Scene 2 - Flint Knapping

This man is seated on a skin inside his house (note the wall post behind him with the house's skin wall lashed to the pole). He is in the process of making a stone tool by chipping or knapping chunks of rock called chert (a silica rock also called flint). He collected the raw chert from river gravel or rock outcrops near his home, selecting the best to use to make his tools and bringing chunks back to camp.

He has laid a small skin apron over his lap to catch some of the chips, but others will fly beyond his work area. First, the knapper knocked thin stone flakes off a core with a hammerstone, forming the general outline of the tool. Now he is using a section of antler to knock off more flakes as he finalizes the tool's shape. The last step will be to finish the tool by chipping the edge with an antler tine flaker.

He wears a laced shirt, skin leggings and shoes, and an animal tooth necklace. His long hair is gathered in bunches on either side of his head and secured with wraps of animal skin.

Technology Scene

Because Paleoindian groups may have come from the west, the timeline begins on the left side of the poster. Since no differences in point styles have been identified between Kentucky's two main regions, the timeline does not really split until the Archaic period.

Paleoindian stone projectile points are the most characteristic artifact collected from Paleoindian sites. The presence of Paleoindian stone points helps to identify and date sites where they are found. Paleoindian points are found all across the state, often made from stone not found locally. They are easy to recognize because they have a broad shallow groove or flute that stretches from the base toward the tip, but the points are not always fluted.

To make a fluted point, the knapper began with a shaped tool called a preform (preforms were shaped following the procedure described in Activity Scene 2). Additional steps in the manufacture of a fluted point consisted of fluting the preform, reducing the width of the point, and grinding the point base and its lower edges. The flutes themselves were made by directly striking a slight projection isolated at or near the base of the point with a section of antler to remove a long thin flake.

Fluted points were used to kill large game animals. They would have been thrown, like darts, or thrust into the animals, like bayonets. A spear's wooden or bone foreshaft fit snugly into the flute, which held the point firmly in place. The foreshaft was detachable. A hunter could pull back the butt-end of the spear then quickly rearm the weapon with a new foreshaft for another shot.

Archaeologists call the earliest points Clovis, and the Clovis points in Kentucky are the same as the Clovis points found in the western United States. The first four points on the technology timeline are Clovis points. Later fluted points (the three on the poster with long flutes that extend

almost all the way up the point) are called Cumberland points. Unfluted points are Dalton or Hardaway points. They are shown on the poster adjacent to Activity Scene 2.

Other stone tools in the Paleoindian tool kit, in addition to the spearpoints, were scraping tools (side scrapers, end scrapers), cutting tools (knives), and incising tools (gravers, beaks). Bone tools pointed at both ends like awls or punches were used to pierce or gouge.

Archaic Period (8,000-1,000 B.C.)

Early: 8,000-6,000 B.C.
Middle: 6,000-3,000 B.C.
Late: 3,000-1,000 B.C.

Five Main Facts To Remember:

* Longest period in Kentucky prehistory: 7,000 years long
* Kentucky's climate became more like that of today
* Atlatl (spear thrower) and groundstone tools developed
* Seasonally mobile lifestyle within home territories: hunted, gathered, and fished
* Regional cultural differences begin to be identified

Illustrations for the Archaic Period consist of four time-specific scenes, five activity scenes, and illustrations of Archaic spearpoints for both the central/eastern and western/southern parts of the state in the technology scenes. A variety of Archaic sites have been recorded throughout the state. Map 2 shows some of the more important ones.

Time-specific Scene 1 - Late Archaic River Settlement

Some of the most important Archaic sites examined by archaeologists in Kentucky are the 48 recorded shell midden Archaic sites (an accumulation of trash and debris that contains large quantities of shells, in this case, freshwater mussel shells) along the Green River and its tributaries in Butler, Ohio, Muhlenberg, and McLean counties. This is a bird's eye view of one of these sites.

The settlement depicted could be Carlston Annis or Read in Butler County, or Indian Knoll or Chiggerville in Ohio County. Seven round houses make up this base camp. They are scattered along the terrace adjacent to the river. The Green River provided an opportunity for canoe transport: two are pulled up to the shore and a third draws near. Elsewhere in Kentucky, Archaic peoples lived in small or large camps on floodplains or ridgetops, in rockshelters, and in the entrances to caves.

This camp is made up of domestic activity areas outside the houses and trash heaps near the

center that form the shell middens. The community has cleared this opening in the forest canopy by collecting wood for the construction of their homes and for firewood. Even so, the edge of the woods is near. The forest edge is cleared away from the dwellings, illustrating the longer occupation of base camps during the Archaic period, relative to the camps of the Paleoindian period. Contrast the proximity of the woods in this scene with Time-specific Scene 6 (Late Woodland village) in the Woodland period and Time-specific Scenes 3 (Mississippian town) and 9 (Fort Ancient village) in the Late Prehistoric period.

The lives of Late Archaic peoples, as well as earlier Archaic peoples, focused on hunting and collecting native animals and plants. Their seasonal round of subsistence activities was structured to most efficiently exploit the diverse natural resources available to them in their home territories. White-tailed deer and hickory nuts were their main food resources, but an assortment of small animals, birds, and fish also were eaten. They ate a variety of nuts, fruits, and seeds as well, and during the Late Archaic period, they experimented with growing their own food in the form of squash.

Time-specific Scene 2 - Early Archaic Rockshelter Camp

Rockshelters in the Eastern Kentucky mountains were used throughout prehistory as camping spots or places for longer stays, depending on characteristics of the group and the shelter. Rockshelters housed various sizes of groups during hunting expeditions, and some even served as base camps. The size of the floor area within the shelter, whether the rockshelter had a warm southern exposure, the type of access provided to the ridgetops above, the shelter's dryness, and its proximity to drinking water were all factors that determined a rockshelter's usefulness as a place to live.

The dry rockshelters of Eastern Kentucky are a unique and valuable resource, rarely found in the Eastern Woodlands. They give a glimpse of the rich tradition of artifacts made from perishable materials such as wood, grasses, and skins that are rarely preserved in open sites. This remarkable artifact preservation is due to two important factors: year-round dryness inside the shelters and the presence of a high relative proportion of nitrates in the soil. In these rockshelters, archaeologists have found split cane basket fragments, woven fiber slippers, fiber bags filled with nuts, matting, cordage, leather, and wooden tools. Unburned, desiccated plant remains, paleo-feces, and tobacco quids also have been discovered at some of these sites. Vandalism has destroyed and continues to destroy these unique and priceless sites.

Many rockshelters were used in the Archaic period. The particular one illustrated on the poster is Cloudsplitter Rockshelter in Menifee County, Kentucky. This cutaway view of the shelter interior shows people standing inside it, as well as others entering it.

Cloudsplitter was used as a short-term camp in the Early Archaic period. The shelter's small floor area was occupied by small groups, probably for short periods of time in the fall as part of their seasonal round of hunting and collecting. Excavations found the locations where posts and surface fire hearths had been. Animal remains found at Cloudsplitter included deer, bear, turkey, turtle, and other mammals. Nuts collected included butternut and black walnut. New stone tools were not made at Cloudsplitter, since only flakes from the resharpening of already made tools

were found.

Time-specific Scene 3 - Late Archaic Shaman Conducting Ritual Activity

This view inside an Archaic house depicts men participating in a ceremony. The man in the foreground is dancing. He wears animal skins with the tails still attached. In his right hand he holds a conch shell, a marine shell obtained in down-the-line exchange from the Atlantic coast (see Archaic Period Activity Scene 5 [Dugout Canoe] for a discussion of Archaic period exchange). In his left hand he holds a ceremonial blade socketed into a bone or antler handle. Around his neck, wrists, and upper arms he wears necklaces and bracelets made of beads of animal teeth and shell. He wears a shell gorget and a stone gorget around his neck. On his head is a headdress made from the feathers of raptorial birds like eagles or falcons.

Two men are seated on skins along the wall of the building. One of the men is dressed like the dancer. He has his conch shell and ceremonial blade laid out on the ground before him, awaiting his turn as the next dancer. The other man is smoking a short, hand-held pipe. The bowls in front of the seated men are made of plant fibers or steatite (soapstone, a soft carveable stone found in the Appalachian Mountains southeast of Kentucky) received in exchange with other groups. They are not made from fired clay. A wooden mask adorned with feathers and red ochre hangs on the wall between the seated men. It is tied to one of the exposed wall supports. These bent saplings form the walls and the roof of the structure in which they are holding their ceremony. Buildings constructed in this manner often didn't require interior support posts for the roof. The framework is covered with bark.

Like other hunting and gathering groups the world over, Late Archaic peoples' rituals were concerned with ensuring success in the hunt, dealing with sickness and disease, and explaining natural and supernatural phenomena. The ritual depicted in this scene is being performed to ensure a prosperous hunting expedition.

Time-specific Scene 4 - Late Archaic Burial Ritual

This scene takes place within a base camp in eastern or central Kentucky. An oval grave has been dug on the edge of the camp. The dead man has been placed in the grave in a flexed position. He holds his favorite spear, is dressed in his best skin clothing, and wears a necklace of shell beads. A woman relative is placing a conch shell at his head. The shaman in charge of conducting the death ritual wears a bear skin. He holds a tortoise shell rattle in his right hand and other ritual items in his left. At the conclusion of the ceremony, he will sprinkle powdered red ocher over the body, and relatives will fill-in the grave. The seated men in the background are singing a death chant and playing drums. Standing near the chanters is a man smoking ritual tobacco in his hand-held pipe. Notice the grass-covered circular house in the background, with its smoke hole vent in the roof.

In the early and middle Archaic periods, few social distinctions existed between individuals, other than those based on age, sex, and personal abilities. During the Late Archaic though, certain individuals were given special burial treatment: elaborate grave goods (artifacts made of non-local materials, such as copper and marine shell) were placed with a few people. This shows

that social differences developed during the Late Archaic. The appearance of these kinds of items in certain burials may reflect the social importance of individuals required to maintain the long-distance exchange networks. Even so, Archaic society can be characterized as egalitarian.

Studies of Archaic burials have shown that Archaic peoples had very few tooth cavities. But the grit in their diet, due to the use of sandstone food processing tools, caused a high amount of tooth wear that led to serious tooth abscesses. Archaic peoples also suffered from arthritis and diseases that produced bone inflammations. They had very high infant mortality and adults lived to be about 60 years old.

Activity Scene 1 - Deer Hunting with Spear and Atlatl

Shown in this winter scene are two men hunting in the woods. Their prey: a white-tailed deer, a major food resource for Kentucky's native peoples throughout prehistory. The man in the foreground is using an atlatl, which worked like a lever to increase his spear throwing power and accuracy. Strapped across his shoulders is a leather bag holding tools needed on the hunting expedition, and a quiver of spears.

The atlatl was a wooden shaft, strong and slightly flexible, with a hook at one end. To use this tool, the hunter fitted the hook into a hole in the butt-end of his spear. He flexed his arm so that the baton and spear lay together, parallel along his forearm. Grasping the atlatl tightly, he hurled the spear. The hunter could then quickly fit another spear into the atlatl for a second shot.

Activity Scene 2 - Collecting and Processing Nuts

Nut collecting and processing was the job of women. This young woman wears a large basket on her back, held on with a tumpline passed across her forehead. She crouches in front of a shagbark hickory, which is the source of the nuts she is collecting. She throws the nuts over her shoulder into the basket (an enlargement of a hickory nut is shown below this scene). Her relatives wove this basket out of grasses or strips of wood for this purpose. She carries a walking stick in her left hand, which also serves as a digging stick should she find any roots along the way.

Above and to the right of the nut collecting scene is the nut processing scene. A woman uses a bell-shaped pestle to crack nuts on a flat sandstone rock or nutting stone. A single pit will form in the base of the pestle in time, and multiple pits will form on the flat surface of the nutting stone. After the nuts are cracked, the woman will dump both shells and nut meats into boiling water. She will skim the protein-rich, milky nut oil off the top and the nut shells will fall to the bottom.

Archaic peoples approached getting food in two main ways: by moving their camps to the resources or by moving the resources to their camps. Using the first method, Archaic peoples lived in seasonal camps and moved as resources became available. Using the second method, they lived in base camps in rich environments and went on hunting and collecting trips.

Activity Scene 3- Basket Maker

Baskets are technically a type of textile. They are manually assembled or woven without a

frame or loom. Baskets can be made by twining, coiling, plaiting, or a combination of the three. Other kinds of items made using these methods include mats, bags, fish traps, hats, and cradles. Baskets and textile artifacts found in Kentucky's caves show that cane, rattlesnake master (a variety of yucca), cattail and rush, canary grass, and the inner bark of pawpaw, leatherwood, and linden were used in basket making and in the manufacture of other types of textiles.

Sitting cross-legged, this woman is making a basket using the coiling method. She is adding another length of prepared wood or grass to the basket, coiling and pulling it tightly as she goes. The basket to the left contains the prepared fibers to complete the container. She wears a bone pin in her hair to keep it pulled back as she makes her basket. A wide variety of bone pins, ranging from plain to fancy, are a distinctive type of Archaic ornament.

Activity Scene 4 - Grooved Axe

First developed by Archaic people, groundstone tools were used for tasks like chopping wood, hammering, and grinding. Shown on this section of the poster are axes, which were used to cut down trees and girdle others to open up spaces for communities in the woods. The man in this scene is beginning to cut down his second tree.

The image on the left shows how the grooved axe was attached to its handle. The other two images show a side view and front view of a fully grooved axe. Some Archaic axes were only grooved on three of four sides.

The stone selected for a groundstone tool had to be very hard and dense. It was generally a metamorphic rock like granite. These kinds of rocks do not occur naturally in Kentucky, though they would have been available through trade, or they could have been collected from gravel in streams with headwaters outside Kentucky.

A native craftsman first shaped a rock by pecking (hitting it with a hammerstone to break off small pieces). Then it was smoothed and shaped by grinding it against a flat abrasive stone like sandstone (shown above this scene in Woodland Period Activity Scene 2) or by rubbing the abrader against the tool. The appearance of groundstone tools indicates that Kentucky's native peoples were increasing their use of plant food resources, since many of these tools were used for plant food processing.

Activity Scene 5 - Dugout Canoe

Travel in Kentucky throughout prehistory was by foot on overland trails, or by water in canoe. Trails, little more than narrow ruts in the ground, followed ridgetops, leading down into the valleys only to cross streams or creeks.

Canoes were made from hollowed-out logs. After selecting a tree large enough, the men chopped it down with their stone axes aided by small fires built at its base. Trees most resistant to disease and rot were the likeliest candidates for dugout canoes. After removing the bark and tree limbs, the log was raised on supports and gradually burned, chipped, and scraped to smooth the outside and hollow-out the inside. Gum and rosin were spread on the parts to be burned. Edges that should not be burned were kept wet with water. A groundstone adze (made of the same

materials and in the same manner as an axe but fitted perpendicular, not parallel, to its handle as were axes) was used to gouge out the charred wood.

The two men in this canoe are traveling upstream from their camp to meet with men from another group. They are transporting goods they will exchange for items used in the routines of daily life, such as baskets and raw materials used in the manufacture of stone tools, but also they will exchange items of ritual significance, such as ornaments made from Great Lakes copper and Gulf coast shell. These non-local items will be placed in graves with the dead or used in rituals by the living.

Archaic people didn't have to canoe or walk to the Great Lakes or Gulf Coast themselves to get these non-local goods. These items could be passed from place to place through a series of exchanges between local trading partners (down-the-line exchange). It was through down-the-line exchange that goods from far outside Kentucky came to be placed in the graves of Kentucky's Archaic peoples.

Technology Scenes

Archaic projectile points functioned as spears, used alone or with atlatls. The Archaic technology scenes show that these spearpoints changed over time but also across space. Archaeologists measure these changes in the shape of the stem, the shape and size of the blade, the overall size of the point, and whether the edges are beveled or serrated.

Archaic points with corner notches and basal notches replace the fluted Paleoindian points; then specimens with side notches appeared; and finally points were made with straight stems, expanding stems, and contracting stems. Specimens were manufactured from locally available cherts instead of non-local ones like those used during the Paleoindian period. Archaeologists have been able to link these differences in Archaic spearpoint styles to particular time periods. This means spearpoint styles are very useful in helping to determine the age of Archaic sites and thereby assigning their relative placement in time within the long Archaic period.

By comparing the spearpoint styles between the two technology timelines, stylistic differences begin to be apparent between the western/southern and central/eastern timelines. On the central/eastern timeline, there is more variation; large and small points appear and disappear frequently. On the western/southern timeline, however, points are mainly medium or large, and the variation is not as great. These differences signal to archaeologists the beginning development of regional cultures in Kentucky.

Archaeologists assign names to the styles of Archaic points as a sort of short-hand, making it easier to refer to them. On the central and eastern Kentucky timeline, from earliest to latest, the point types illustrated are Kirk, LeCroy, and Kanawha Stemmed (small points with bifurcated or "splint in two" bases), Big Sandy, Matanzas, Morrow Mountain (contracting stem), Brewerton, McWhinney, Merom-Trimble, Wade, and Cogswell.

On the western and southern timeline from earliest to latest, the point types illustrated are Kirk, Lost Lake (deep corner notch and a beveled blade along right edge), Eva (basal notched),

Benton, Big Sandy (side notched), Saratoga (contracting stem), Turkey Tail (an oddly-shaped stem resembling a bird's tail; these points often are manufactured of non-local cherts and are found in caches), and Wade (straight stem).

Some of the specimens on the poster look like they are out of proportion, their blades being much too small for their stems. Some of these are hafted endscrapers, made from spearpoints that broke during use or manufacture. These were reworked into new tools. Alternatively, they may represent long-bladed spearpoints that have been resharpened over and over again, which made the blade smaller. On the western/southern timeline is a specimen with a very narrow blade. This is a Karnak drill.

Woodland Period (1,000 B.C-A.D. 900/1000)

Early: 1,000-200 B.C.
Middle: 200 B.C.- A.D. 500
Late: A.D. 500-900/1,000

Five Main Facts To Remember:

* Manufacture of pottery begins and the bow and arrow is developed
* Large burial mounds and square or circular earthworks are constructed
* Trade in non-local goods for ritual purposes is carried out during the Middle Woodland period
* Gardened part-time - raised native and non-native plants - gardening becomes increasingly important during the period
* Lived for longer periods in one place

Illustrations for the Woodland Period consist of six time-specific scenes, three activity scenes, and illustrations of pottery and projectile points from central and eastern Kentucky, and western and southern Kentucky in the technology scenes. Woodland period sites have been found throughout the state (see Map 3 for important sites).

Time-specific Scene 1 - Cultivated Plant Foods

It is no accident that the plants first cultivated by Kentucky's native peoples are placed on the poster at the "boundary" between the Archaic and Woodland periods. The earliest cultivated plant remains appear as dried-out squash rind fragments at Cloudsplitter Rockshelter in Menifee County around 1,700-1,500 B.C. Throughout the Woodland period, archaeologists can document the steadily increasing importance of plant foods tended by people.

Cultivation, though is a relative term. Late Archaic peoples noticed that gourds and weedy, seed-bearing plants grew wild on their trash dumps and along the margins of their camps in disturbed settings. These environments were much like the edges of our own gardens today, and some of the "weeds" in our gardens are the plants the Late Archaic and Early Woodland peoples "cultivated". Native peoples began the journey into plant cultivation by first helping these plants grow: saving the seeds of the best and hardiest; and watering and weeding them to help improve yields. In doing this, they changed the character of the seeds themselves, making the cultivated varieties recognizable to archaeobotanists (archaeologists who specialize in the study of plant remains) when they examine charred plant fragments under microscopes. Eventually, Woodland peoples became gardeners, purposefully clearing plots to plant seeds, and tending them carefully for the harvest.

The crops shown in this scene are not segregated, but are integrated much like they would have been in a Woodland garden. The plant at the bottom of the scene is squash. Researchers disagree about whether squash was native to South or Central America or native to North America. A tall, single-headed sunflower is drawn in the center. The plant to the immediate right is goosefoot, while the plant to the far right is maygrass. These latter three, along with others (erect knotweed, little barley, and sumpweed) are known as the Eastern Agricultural Complex. They are starchy (goosefoot, maygrass, erect knotweed, and little barley) or oily (sunflower and sumpweed) seed-producing plants native to the area that were domesticated and grown by Kentucky's Woodland people.

Time-specific Scene 2 - Early Woodland Cave Explorers/Miners

Prehistoric cave exploration began during the Early Woodland period and continued into the Late Prehistoric period. Kentucky's native peoples entered caves for any number of reasons: to explore, to mine the minerals there, or to draw geometric designs or human figures on the walls and floors in pursuit of their spiritual needs.

This scene reconstructs the prehistoric exploration of the underground passages of Salts Cave in Hart County and the mining of gypsum there by prehistoric spelunkers. The man with his back to the viewer holds aloft his cane torch, which burns at a steady and predictable rate. In his left hand he holds additional lengths of cane to use as a torch for the return journey. His companion has shoved his torch into the ground to free up his hands for mining gypsum from the cave walls. Kneeling, he is battering the crystalline gypsum growth off the walls with a rock and into a hide or twined fabric bag.

These prehistoric peoples were extremely skilled spelunkers. Evidence of their cave exploring and mining activities occurs in the form of paleo-fecal deposits, cane torch fragments, cane caches, burned out campfires, slippers, gourd fragments, footprints, and smoke-blackened ceilings from campfires or torches. Skeletons and bodies that have not yet decayed due to the special, dry environment of caves have been found too, evidence of long-ago mining accidents or tragic cave explorations.

Most mining in Salts Cave occurred in the higher and drier main passages. Mining could have been done by groups of a few people, with one torch carried by every second or third person.

Archaeologists estimate that a successful mining trip into Upper Salts Cave would have taken only about five to six hours, but experienced cavers could have made the round trip in only two hours. A group of five or six could have wandered for 12 hours in the cave without having to carry too burdensome a load of fuel, but like modern cavers, they also would have needed to have carried food and water with them.

Prehistoric miners mined gypsum, mirabilite, selenite, and satinspar. Gypsum is a crystalline growth that forms on cave walls as deposits 1/4 inch thick or more. Sometimes it takes the form of delicate flowers. Mirabilite occurs as a hair-like growth. In places where sheet gypsum has fallen off cave walls, the patch is sometimes covered with mirabilite. Gypsum and mirabilite both form a white powder; mirabilite upon contact with the air outside the cave environment, gypsum after being heated. Mirabilite was a useful remedy for constipation; gypsum was a common pigment for paint. Both may have been used in ritual and/or traded.

Selenite occurs as single, large, transparent crystals in the form of long needles, while satinspar occurs as hard, nearly transparent, crystal-like masses in the form of flower-like formations or crusts. Indian peoples collected these translucent and sparkling crystals by digging into dry cave sediments on cave floors. They were mined for their mystical, magical, or symbolic properties and traded.

Time-specific Scene 3 - Middle Woodland Burial Mound and Tablet

Across southern Ohio, western West Virginia, and central and northern Kentucky during the Middle Woodland period, the peoples of the Adena and Hopewell cultures built burial mounds, circular enclosures, and geometric earthworks. In central and northern Kentucky, the Adena people built large conical burial mounds of earth on high promontories with wide vistas of the surrounding region. These mounds served as boundary markers. Elsewhere in Kentucky, Adena people built sacred circles like the ones at Mount Horeb in Fayette County and Bogie Circle in Madison County.

The Robbins Mound in Boone County is shown here in an artist's reconstruction. Measuring 115 feet across and 20 feet high, it was one of the largest Adena burial mounds in Kentucky. This mound was excavated in the 1930s by the Works Progress Administration (WPA), and the information from these investigations gives us a picture of native burial practices and spiritual beliefs.

Built of individual basket loads of native clays dug from near the mound by many workers, the Robbins Mound grew accretionally (gradually, over time). It was built in eight stages. Cremated human remains were placed on the floor of a circular structure constructed of paired-posts and were covered with a low earth mound (Stage 1). Then the structure and the mound were covered with earth (Stage 2). The remaining six stages involved the building of various levels of tombs. Some of these tombs were log-lined . Other individuals were placed on prepared earthen surfaces or bark-lined depressions, and earth was mounded over them. A total of 52 tombs in all were contained in the Robbins Mound, which testifies to its use as a burial site over several generations.

Mostly adults, both male and female, were buried in the Robbins Mound, but the graves of

young people were present also. These people stood, on average, about 5.1 to 5.5 feet tall and were broad shouldered. They had large flat faces, prominent noses, weak to moderate chins, and rounded heads that showed evidence of some intentional deformation. Ritual goods were buried only with individuals placed in log tombs with ramps leading to them. Spearpoints were placed in the graves of individuals over the age of 15; shell necklaces, copper bracelets, mica crescents, and red ochre occurred with both adults and young people.

This scene shows the final stages of burial in a log tomb during one of the later stages of mound construction. In the center of the mound at the top of a ramp, one tomb stands open; the body barely visible on the tomb floor. A pile of prepared logs, for sealing the tomb, lie to the right. A sealed tomb and the ramp leading to it are located to the right of the open tomb. Ritual activities are shown taking place on top of the mound near the open tomb and at the base of the mound. A shaman, recognizable by his ritual attire (antler headdress and cape) is conducting a ritual that must take place before the tomb can be sealed. One of his assistants, an apprentice wearing a feathered headdress, crouches near the open tomb. His other assistant, who also wears a feathered headdress, and an aide are climbing the ramp to the tomb, carrying perishable items to be placed with the body.

Five other individuals are involved in the preparation of the burial site. Two are seated on the ground, and one kneels at the base of the ramp. To their left, a man and a woman purify the items to be buried with the deceased. The man is seated in front of a fire, holding objects in the path of the smoke. The woman washes the purified ritual objects then lays them out on a mat on the ground. These ritual items include copper bracelets, marine shell necklaces, and mica crescents. The basket that carried these items lies beyond the woman at the base of the mound. These ritual items are not locally available in Kentucky. Instead, they must be obtained through exchange networks first established by Archaic peoples.

Tablets of the sort illustrated to the upper right of the mound have been found in Adena mounds in Kentucky, Ohio, and West Virginia. This one is one of the two tablets found in the Gaitskill Mound in Montgomery County. The larger Wright Mound in Montgomery County and the Robbins Stone Mound in Madison County each have produced a carved tablet as well.

This particular specimen, the Gaitskill Clay Tablet (in the collection of the Museum of Anthropology, University of Kentucky), is unique in that it is made out of a very hard, fine-grained, compact clay (most are made of fine-grained sandstone). It was found with another tablet engraved with a different design and made from stone. Mica fragments, tubular stone pipes, and copper bracelets were recovered along with the two tablets.

The Gaitskill tablet measures 4.4 by 3 inches. The design is bilaterally symmetrical, consisting of four compositionally balanced quadrants and a border. It is interpreted as depicting a frontally-posed human figure with certain bird-like features. The lower two quadrants show stylized leg and claw motifs, while the upper two quadrants (the ones shown to the right on the poster) have been interpreted as large human hands, with thumbs, presented at shoulder level with the palms out. Head and face are absent. This image was engraved by cutting out the background of the tablet with a blunt tool, which left the figure in relief.

The tablets and the designs on them carried meaning within the context of Adena rituals and ceremonies. The surface of the tablet looks painted or stained, as if it had been used as a stamp. It would have been especially suited to block printing, since the designs were carved in relief and the tablet had a raised border. A pigment in a fluid, perhaps red ochre in blood or fat, could have been used as the "ink." Multiple prints arranged in a pattern on leather or cloth would have resulted in a rich, luxurious design. By wearing an article of clothing printed with these images, an individual might have been given special status, respect, or responsibility.

Time-specific Scene 4 - Middle Woodland House

Middle Woodland peoples built villages or base camps, as well as transient camps. This artist's reconstruction of a Middle Woodland house in a base camp is based on the results of excavations at a site near Pineville in Bell County, Kentucky. The house is circular, with a roof made of thatch. In the center of the roof is the smoke hole. The skin door to the house is pulled to the side to let light and air into the dwelling.

As in previous periods, daily activities during the Middle Woodland period took place most often outside the house. In this scene, two men, one standing, the other sitting cross-legged on a mat near the house, are examining a basket. They may be trading partners, discussing its price. Along the sides of the house are various tools: a digging stick and nutting stone to the left of the men, a gourd container and a nut collecting basket to the right of the door.

A woman, the wife of one of these men, is sitting in her work area, not far removed from the fire. She sits cross-legged on a mat, winnowing seeds in a basket. Two other containers lay on the ground to the right. A pot filled with stew is cooking, nestled down into the coals of the fire, while strips of meat hang from a spit. Not far to the right of the cooking fire is an earth oven (a pit filled with rocks). It was used for roasting meats, but it now stands empty except for the lowest level of rocks.

From the excavations at Salts Cave Vestibule, archaeologists know that Woodland people hunted deer, raccoon, and turkey mainly, though other mammals and smaller animals, reptiles, and fish were taken, too. Their plant food diet consisted of stored seeds and nuts. Fecal samples from Upper Salts Cave show that these people ate goosefoot, maygrass, sumpweed, sunflower, squash, amaranth, grape, strawberry, and hickory nuts. Any one of these foods may be cooking in the pot on the fire in front of this house.

Time-specific Scene 5 - Smoking Tobacco in Middle Woodland Times

This man is smoking a mixture of tobacco, sumac, and sweet gum. He holds a length of cordage, which he uses to periodically light the pipe. Historically, tobacco smoking was widely used to validate transactions between groups, individuals, and the supernatural. It may have been used in the same contexts prehistorically, too. The type of tobacco smoked by Kentucky's prehistoric inhabitants was different than the burley tobacco grown by Kentucky farmers today. It was *Nicotiana rustica*, a non-native North American crop that appeared first in Middle Woodland times.

Middle Woodland pipes are made of fine-grained sandstone formed by grinding the stone into shape. The pipe bowl this man uses is an elbow pipe, simple in design, but others are quite elaborate, being highly polished and shaped in animal forms. The bowl of the pipe is fitted with a length of cane that forms the pipe stem.

Two necklaces, one of bone beads, the other of shell, hang around his neck and he also wears a gorget (or pendant, here a trapezoidal, polished groundstone ornament made of banded slate) strung on cord made of twisted plant fibers. He is wearing earplugs of shell or wood, covered with a thin sheet of copper and bracelets. He keeps his hairstyle by plucking out hairs from his scalp with shell tweezers.

Time-specific Scene 6 - Late Woodland Village

Late Woodland peoples did not build mounds or earthworks; they lived in permanent villages all across the state, both large and small, in rockshelters, and in long- and short-term camp sites. Some of their villages were built along rivers like the Dedmon Site in Marshall County and the Hansen Site in Greenup County. Others like the Pyles Site in Mason County, which is depicted on the poster, were built on ridgetops.

The Pyles Site was a circular village arranged around an open plaza. It was built on a broad ridge overlooking the North Fork of the Licking River (shown in the background) not far from salt licks and an important north-south trading route used in historic times. The permanence of this village is witnessed by the clear paths leading to it from all sides and a deforested area extending in a wide band around it. Archaeologists have documented a number of these circular village sites in the vicinity of Pyles.

The village consists of two segments, with six houses on one side of the plaza and seven on the other. These two segments are inhabited by households of closely related kin. Since all the houses are circular and are the same size, it is safe to say that no significant social differences existed in the village, except those based on personal achievement.

Activity Scene 1 - Making Pottery

The woman in this image is making a large jar. She collected the clay she used from locally available clay sources. After cleaning the impurities out of the raw clay, she added crushed rocks (limestone, sandstone, or stream grit) to the clay as temper (temper helps distribute heat evenly through the clay, helping to prevent breakage during firing).

To form the base of the jar, she made a cup out of a ball of clay by pressing it against her elbow. Then she placed it on a large curved piece of broken pottery, which helped her turn the jar to form the walls (there was no potters' wheel in prehistoric Kentucky). Using long coils of clay, she built up the jar walls. Now she is paddling the coils to join them, by hitting the outside of the pot with a paddle while holding her fingers along the inside of the pot. Cordage, made from twisted grasses or bark, is wound around the paddle. (Other women in other parts of Kentucky paddled their jars with plain paddles; some paddles were carved with straight lines or criss-crossing lines. Whacking a pot exterior with carved paddles left raised designs on the outside of

the pot, called simple stamps or check stamps). When she has finished making the pot, she will heat it in the open in the hot coals of a fire.

Her pot is resting on a piece of fabric made using a technique called twining. Twining consists of closely twisting pairs of yarns around other yarns or yarn parts. A variety of fabrics can be made in this matter, from very coarse to fine with intricate designs.

Activity Scene 2 - Celt Manufacture

The man in this scene is resharpening his celt, a process much like resharpening an axe, but the celt was a technological improvement on the grooved ax of Archaic times. His groundstone production tools lie on the ground beside him. The bottle in the background holds water, which he has poured into a ceramic bowl. He keeps the celt cool during resharpening by pouring water over it and the flat sandstone abrader. The wooden handle of the celt lies on the ground, too, along with a wooden mallet. He will use the mallet to knock the celt into the handle. A side and front view of a celt, and how it fits into the handle, complete this scene.

Activity Scene 3 - Creating a Petroglyph

On a broad sandstone rock outcrop, this Woodland craftsman is pecking a series of petroglyphs (pictures carved in stone) called turkey tracks. They resemble the petroglyphs at sites in Estill and Powell counties.

He is using a wooden hammer and a pointed antler tool. Petroglyphs (and more rarely pictographs [painted pictures on rock]) are found across Kentucky, although they occur most frequently in the Eastern Kentucky mountains. Geometric symbols (circles, arcs, semi-circles, unpatterned lines, spirals, and zigzags), animal tracks (turkey, rabbit, raccoon, and the cloven hoofs of deer), and rarely humans (full figures, arms and hands, and feet) have been documented. Sometimes they occur as single motifs. Other times there are many carved in one spot. They are found on isolated rocks, on cliff faces, and inside rockshelters on walls or roof fall. Their exact age and purpose is unknown.

Technology Scenes

Pottery begins to be manufactured in the Woodland period, its presence reflecting the appearance of a new technology and an increased sedentism brought about by an increasing reliance on plant foods grown in Woodland gardens. As people began to devote more time to tending gardens, they moved less in search of food. Spearpoint styles are different from Archaic specimens, and toward the end of the Woodland period, true arrowheads appear, signaling the development of the bow and arrow.

Regional stylistic variation in both pottery and points illustrates the continuation of clear regional cultural differences, though developments in vessel shape and size, and point style follow the same general trajectory. Despite the fact that the ceramic trends parallel each other in the two regions, changes occur sooner and are more striking in the west and south, identifiable when the relative placement of vessel forms is compared between the two technology timelines.

Pottery

Woodland people used pots for cooking, storage, serving food, and special ceremonies. Ceramics didn't replace containers of other types. They were used along side baskets, gourds, and wooden and skin containers.

The earliest pottery vessel forms are thick-walled, flat-bottomed jars and basins. They are decorated with cordwrapped dowel impressions, pinched nodes, nodes, or lip notches. Vessel walls become thinner during the Middle Woodland period and vessel sizes become more variable. Pots with geometric zig zag designs, nested diamonds, stamped designs, cone-shaped legs, and incised lines decorate these jars. Late Woodland jars in central and eastern Kentucky have sharply defined shoulders and pointed bases and are covered with impressions left by cordwrapped paddles. In western and southern Kentucky, bowls and handled jars appear during the Late Woodland, much earlier than in other parts of the state. Intricate geometric designs are incised on jar necks.

Archaeologists have assigned names to particular ceramics, as they do to particular projectile points, making it easier to refer to them. On the central and eastern Kentucky timeline are examples of pottery types with names (from earliest to latest) like Fayette Thick, Zorn Punctate, Paintsville Simple Stamped, Adena Plain, Montgomery Incised, McGraw Cordmarked, McGraw Plain, and Newtown Cordmarked. In western and southern Kentucky are illustrations (from earliest to latest) of Alexander Pinched, Long Branch Fabric Impressed, Crab Orchard Fabric-Impressed, and Yankeetown Incised. Also illustrated in these timelines are types of pottery found at Middle Woodland sites in Kentucky but not made in Kentucky. These include Connestee Simple Stamped, Chillicothe Brushed, Chillicothe Rocker Stamped, and Hopewell Cross-hatched Rim.

Points

Woodland spearpoints are stemmed points. They are made in both regions and have corner notches and straight stems, contracting stems, or expanding stems. Spearpoint names from earliest to most recent in central and eastern Kentucky are Motley, Kramer, Noluchucky, Adena, Robbins, and Lowe Flared Base/Chesser Notched. Spearpoint names in the west and south include Motley, Cypress, Kramer, Adena, Copena, Affinis Snyders, and Lowe Flared Base. The earliest arrowpoints in central and eastern Kentucky are Jack Reef points and the equilateral triangular Levanna points. In the west and south are Madison points, which take the form of isosceles triangles.

Late Prehistoric Period (A.D. 900/1000-1700/1750)
Mississippian and Fort Ancient Cultures

Five Main Facts To Remember:

* Full-time farmers live in permanent towns and villages
* Two regional farming societies (Mississippian and Fort Ancient) are present, with different socio-political organization and settlement patterns
* Large flat-topped earthen temple mounds were built in the west and south; low earthen burial mounds were built in central and eastern Kentucky
* Extensive trading networks of shell, pipes, and stone hoes with Southeastern and Midwestern peoples
* Mississippian and Fort Ancient farming societies continued into the Historic period

Illustrations in the Late Prehistoric Period consist of 12 time-specific scenes, and illustrations of pottery and projectile points from the Mississippian (western and southern Kentucky) and Fort Ancient (central and eastern Kentucky) culture areas in the technology scenes. Map 4 shows the locations of important Late Prehistoric towns, villages, and camps.

Time-specific Scene 1 - Native Archer

With his feet in the Late Woodland Period but his head and arm in the Late Prehistoric Period, the placement of this archer depicts the appearance of the bow and arrow during the Late Woodland period and its continued use throughout the Late Prehistoric period. Native peoples developed this weapon around A.D. 800, and its appearance signals changes in hunting practices.

Small, true arrowheads generally replaced spearpoints at this time, though spears continued to be made and used. Initially, arrowheads were made with stems. Later, the stemmed arrows were replaced by tiny triangular points of various shapes and sizes. These triangular points were the only form of stone-tipped arrow of the Late Prehistoric period. Arrows were attached to the arrow shafts with strips of deer gut wrapped around the tip of the shaft or with a glue made from boiled deer antler.

The archer is in the process of drawing his bow. This is a self or "simple" bow, the type of bow used throughout the Americas, and the only type used east of the Mississippi River. Hickory, ash, and black ash were some of the most popular bow-woods, with the best bow-wood, Osage orange, growing south of the present state of Missouri. A quiver of arrows hangs over the man's shoulder, and a stone knife is secured at his waist.

Time-specific Scene 2 - Corn Cultivation

This scene of a woman hoeing weeds in her corn field is placed in the very center of the Late Prehistoric period panel to illustrate the very central role corn and its cultivation (the preparation of corn fields, the planting, tending, and harvesting of the crop, and its storage until spring) played in Late Prehistoric life. Adding corn to the list of plants grown by the Woodland gardeners and the changes in subsistence activities associated with its cultivation transformed these people into farmers.

Both Mississippian and Fort Ancient peoples depended on corn, and growing it was their way of life. However, they placed a different emphasis on the other food crops. Mississippian peoples continued to depend on the domesticated starchy-oily seeds and nuts, while Fort Ancient peoples turned their attention to beans and wild plants. Both groups continued to grow squash, gourds, sunflower, and tobacco.

Prehistoric corn did not grow as tall as the corn of today, nor was it as productive. Descriptions of native peoples' fields by the earliest European explorers indicate that they planted their corn in hills, like the one illustrated here, with 3-4 plants per hill. Interplanted with the corn were squash and beans. The squash grew to cover the hill and surrounding dirt, shading and holding moisture, while the beans used the corn stalks as stakes.

By the type of hoe she is using, we can tell that this woman is a Mississippian, since only the farming peoples of western and southern Kentucky used stone hoes (Fort Ancient farmers used large freshwater mussel shells or elk shoulder blades as hoes). An example of a Mississippian stone hoe also is illustrated in the technology scene on the far left-hand-side of the poster. Stone hoes were attached to handles in the manner shown here. Through use, the working end was smoothed and polished. Because of this, hoes were resharpened periodically, and the distinctive fragments produced by this resharpening have been found at sites throughout western and southern Kentucky.

The chert for hoes was mined at quarries located in southern Illinois (Mill Creek Chert) and in western Tennessee (Dover Chert). These hoes were manufactured by part-time craftsmen and exchanged throughout the Mississippi River valley.

The woman is dressed in a short, wrap-around skirt of skin. On top of her head is a bone or shell hairpin that ties back her hair while she works. Attached to the hair pin is a single feather. She wears twined slippers on her feet.

Time-specific Scene 3 - Mississippian Culture: A Large Town

The largest native settlements in Kentucky are the Late Prehistoric town centers scattered along the Mississippi, Cumberland, and Tennessee rivers of western Kentucky. Mississippian towns in southern Kentucky never attained the size and extent of the western towns.

Partially excavated by WPA workers in the 1940s, this scene shows the town of Jonathan Creek in Marshall County, which covered 14 acres. Jonathan Creek runs past the town and into the background, its confluence with the Tennessee River barely visible. The corn fields are located beyond the stockade walls in the background. Notice how far away from the town the surrounding trees have been cleared.

Unlike many other towns in the region, this town was almost completely encircled by a stockade made of logs set upright in the ground. The portion of the town not stockaded follows the edge of the creek bank, which was used as a natural defense. At regular intervals (between about 64 and 67 feet and spanned by a total of about 52 posts), rectangular bastions jut out from the stockade. These are some of the defensive elements of this fortified town.

The entrance or gateway to the settlement is near the bottom of the scene. It is a three-foot gap in the stockade protected by a curtain wall. A group is about to enter the town through the narrow gap between the curtain wall and the stockade proper. Notice that the entrance is well guarded by a gateway tower and two bastions. The tower was built of massive timbers so that an interior platform above the stockade with a view of the gateway could support the weight of men manning the post. Regarding the bastions near the gateway: the one on the left is somewhat oversized, while the one on the right is situated adjacent to the entrance.

Over 1800 people lived within the stockade at Jonathan Creek. Their houses occur in two groups, separated by three large, flat-topped earthen mounds and the plaza they surround on two sides. The closest habitation area consists of over 40 rectangular houses. It is difficult to determine just how many homes are present in the village area beyond the mounds, due to distance. Over 20 are visible.

A variety of houses were identified during the excavations at Jonathan Creek. Most of the houses were rectangular, their walls made of posts set into the ground. They ranged in size from 13 by 16 feet to 25 by 32 feet. For some houses, the posts were set in trenches. Some houses had walls covered with mud mixed with grass (daub), while others were covered with bark, mats, or skins. Few had central posts to support the thatched roofs, the log wall posts bowed to form the roofs. Smoke holes were located in the center of the top of the roofs. Domestic work areas were located outside the houses. Surrounding the houses closest to the stockade, you can barely see people at work, doing domestic tasks outside their houses.

On top of each mound is a structure and possibly an enclosed area, though only the structure on the closest mound is really visible. It is constructed in the same fashion as the houses, but it is bigger.

No large cemeteries occurred inside the stockade at Jonathan Creek, only small groups of graves in the vicinity of house groups. Graves of important people were placed in the mounds, sometimes lined with stone brought to the mounds from some distance.

Time-specific Scene 4 - Mississippian Culture: Grinding Corn In Front Of A House

Throughout prehistory, native women conducted their domestic activities outside their houses (compare this scene to Paleoindian Time-specific Scene 2, and to Woodland Time-specific Scene 4). In this scene, located just outside the door of her rectangular house with daub-covered wattle (a woven stick framework between the wall support posts) walls and thatched roof, a woman is making cornmeal by pounding corn kernels in a hollowed-out stump with a wooden maul. She had soaked the dried corn in wood ashes (lye) to remove the hard skins and make the grain soft before she began pounding it. The water-tight basket in which she soaked her corn and the winnowing basket she will use later lie on the ground next to the wooden stump.

She is dressed in a wrap-around skirt made of twined fabric, the geometric designs created by the placement of warps, the twisting of wefts, and the color of the yarns she dyed. One of the designs, a cross inside a circle, also appears on ceramic vessels and shell jewelry. She wears a vest of simpler weave, along with many necklaces, arm bands, and a few bracelets. She wears a

headband to hold back her hair.

Time-specific Scene 5 - Mississippian Culture: A Chief On The Mound

This scene depicts the paramount chief of Jonathan Creek, Wickliffe in Ballard County, Adams in Fulton County, Rowena in Russell County, or any number of Mississippian towns in western or southern Kentucky during a ritual. He stands on top of one of the large mounds at the center of the settlement. He faces the rising sun, the blufflines of the river off to his left. In the plaza down below his feet are the worshippers, the common people of the town, their bent bodies casting shadows on the plaza grounds.

He is dressed in an elaborately feathered cape and headdress made especially for him by the village women. They twined special yarns to produce this cape, incorporating the features of eagles, hawks, and other birds of prey in bands across the cape. An especially finely twined fabric is wrapped around his waist and falls almost to the ground. In his right hand he holds a large ceremonial knife, made of chert available only through trade.

The religious concerns of Kentucky's farming peoples were similar to those of traditional farming peoples the world over: ensuring success in farming and hunting, dealing with sickness and disease, and explaining natural and supernatural phenomena. The ceremony being performed in this scene may be related to ensuring a good harvest in the fall or good weather for spring planting. Or it may be taking place in anticipation of the arrival of foreign trading partners, when the townspeople and their visitors will play games, feast, and exchange day-to day goods as well as exotic items.

Time-specific Scene 6 - Mississippian Culture: Engraved Shell Gorget

This marine shell gorget cut from a conch shell was found at Eddyville in Lyon County. Engraved on it is a man dressed for the game of chunkey. This game of ritual significance involved several players throwing or shooting spears toward a spherical stone which was rolled on the ground. Players would try to anticipate the chunkey stone's path as it rolled, and the player whose spear landed closest to the stone would win the game. Many chunky stones have been collected from sites in western and southern Kentucky.

The gorget itself is symmetrical and saucer-shaped, measuring five inches in diameter. The engraved image is partially enclosed by a border of nine engraved lines. In the center of the gorget, the male figure is in the position of a discus thrower. In his right hand he holds a chunky stone, his arm thrown back as if in the act of throwing the stone. His left hand extends outward to the edge of the shell and firmly grasps a wand-like object with plumes attached to its upper end. The object at the lower end is difficult to identify. This may be a knife, bent inward across the border lines.

The player's face is turned to the left. His right knee is bent and rests on the ground, while his left foot is set forward as it would be during the act of casting the disc. His eye is diamond shaped. He wears bracelets on his wrists and upper arms, and bead necklaces. The lower lobe of his exposed ear has a disk earring. A long pendant ornament falls from the earring. His face is

painted or tattooed with three lines extending across the cheek from ear to mouth. A crest or crown representing the hair, possibly arranged in a ritual style, is on top of his head.

The lower part of his body is covered with an apron-like garment attached to the waistband. A pouch with pendant ornaments hangs over the waistband. Moccasins are on his feet. Shell gorgets portraying chunkey players or figures in this style, some virtually identical to the Eddyville gorget, have been recovered from Mississippian towns throughout the Southeast, testifying to the participation of the Kentucky settlements in this regional cultural expression.

Time-specific Scene 7 - Mississippian Culture: Stone Box Grave

Some Mississippian groups, like the inhabitants of the Tinsley Hill Site in Lyon County, buried their dead in stone box graves. They formed the box by setting large, flat fieldstones of limestone or sandstone on edge around the grave perimeter, as well as laying them flat over the body. In this scene, the grave attendant, who is not a member of the deceased's clan, is about to fit the last stone over a man from his village or town. The dead man is laid out on his back in an extended position.

On his chest is a mask gorget and he holds a feather from a bird of prey in his left hand. Other personal items placed in the grave include a quiver of arrows and a pipe, but the shadows don't permit our view. Compare this way of burying the dead with that depicted in Time-specific Scene 4 of the Archaic Period.

The health of the Late Prehistoric peoples was affected by their diet and the diseases caused by settling in one place for long periods of time and living in large groups. Their health problems differ in important ways from those of their more mobile ancestors, who lived in smaller groups and ate a more varied diet. They had a shorter life expectancy than earlier groups. They experienced serious tooth decay due to eating a diet high in carbohydrates (in other words, corn), though their teeth weren't worn down as much as earlier peoples. Many individuals of both societies were afflicted with arthritis, anemia, and tuberculosis or tuberculosis-like diseases.

Time-specific Scene 8 - Fort Ancient Culture: Cooking Food

This Fort Ancient woman is preparing a meal. She is kneeling beside the fire, stirring her stew with a wooden spoon. Her cooking pot is suspended over the fire by a length of rope threaded through the handles on the sides of her pot and attached to a framework of three long, wooden poles. Compare this cooking scene with Woodland Period Time-specific Scene 4. In that earlier scene, the Woodland cook, lacking handles on her pot but having a pointed base on it, nestled the jar into the fire and heaped the fuel around it.

Time-specific Scene 9 - Fort Ancient Culture: A Village

The Sloan Site in Pike County was a village built along the Levisa Fork of the Big Sandy River in Kentucky's Eastern Mountains where the floodplains are narrow and the mountains rise steeply from them. Circular Fort Ancient villages have been found in central Kentucky as well, such as Florence in Harrison County and Guilfoil in Fayette County, but Sloan is not an average Fort

Ancient village, for it was the only Fort Ancient village in central or eastern Kentucky that was stockaded.

The log stockade at Sloan completely encircled the village. A narrow, lapped-over entrance is visible in the foreground of the scene. This stockade differs from the one that partially surrounds Jonathan Creek, since Sloan's stockade lacks bastions and a watchtower at the entrance. It is possible, therefore, that the stockade at Sloan was not built for defense. Shown in the scene are two individuals walking toward the village entrance. They may be returning from a hunting trip. The cornfields extended beyond the village on either side, along the river on the floodplain. Notice that, as with the Mississippian town illustrated on the poster, the margin of the woods is located far beyond the village and its fields.

The village consists of seven completed houses arranged around a plaza, with a pole marking the center of the village. One house on the right side of the village is still under construction. You can see that the rectangular framework of poles has been completed, but neither the thatched roof nor the bark covered walls of the structure have been started.

All the houses are rectangular, and average 28 feet by 19 feet in size. The walls are made of posts set into the ground. Central posts support the roofs. Smokeholes are located at both ends, at the top of the roof. A roofed area separated from the house, like a ramada or portico, is shown adjacent to one of the houses in the foreground. This is where most domestic activities would have taken place. A free-standing log wall or screen stands between two houses in the background.

Activities within the village were arranged in concentric rings around the center pole. The plaza was kept clean of debris and served as the public space where ceremonies and social events were held. Between the plaza and the ring of houses was the domestic activity zone. Here is where the porticos, most storage pits, earth ovens, and surface fires were located. In back of the ring of houses (the dwelling zone), between the houses and the stockade, was the refuse disposal zone and the burial zone.

In the refuse zone, the villagers disposed of their trash and garbage. They usually did not dig special trash pits but rather threw the trash on the ground.

The dead were buried singly in the burial zone, most commonly in a narrow trench dug into the bottom of a wider pit. Flat stone slabs covered the trench, and dirt covered the stones and filled the pit. Almost half of the people were buried with personal ornaments: shell bead necklaces or shell pendants made from marine shells. The graves of people of different ages and genders contained similar grave goods.

At central Kentucky sites, like the Florence site in Harrison County, Fort Ancient people buried their dead in low earthen mounds located on the inside edge of the plaza. These mounds and a zone between the plaza and the houses served as their cemetery. The placement of some individuals in the mound may reflect their achieved status within the community.

Fort Ancient people did not build flat-topped mounds, and their villages did not reach the size

of Mississippian towns. Because of these characteristics, and those just described, archaeologists surmise that Fort Ancient culture was more egalitarian than Mississippian culture. Within Fort Ancient society, leadership was vested in the individuals who had achieved personal status due to their own achievements.

Time-specific Scene 10 - Fort Ancient Culture: Engraved Shell Gorget

This marine shell gorget was placed on the chest of an adult buried at the Hardin Village site in Greenup County. Shell ornaments like this gorget begin to appear at Fort Ancient villages around A.D. 1400, signaling the enhanced participation of Fort Ancient peoples in long-distance exchange networks.

This style of mask gorget is referred to as a weeping eye due to the lightning bolt or flowing tears engraved around and below the eyes. Called "masks," they represent human faces but were not meant to be worn over the face of an individual, as is the case with many other types of masks. Holes for the eyes were often punched completely through the shell, but were not threaded to suspend the ornament. Sometimes the carver removed some shell to leave the nose or mouth in relief, rather than engraving these features. In this case, a long narrow ridge of shell defined the nose and a hole punched through the shell serves as the mouth. The engraved line at the top of the mask may denote hair, while the three lines in the "chin" area may be tattoos.

Archaeologists think these mask gorgets were linked in some way to war or hunting, since most are associated with males. The masks may symbolize the Thunderbird or other supernatural beings and may have functioned to gain the power of these creatures for success in hunting and fighting.

Time-specific Scene 11 - Fort Ancient Culture: Warrior and Victim

This scene is placed in the center of the poster to imply the increased conflict in both regions during this period. At the central Kentucky site of Larkin, occupied in Bourbon County sometime between A.D. 1500 and 1600, a 30 to 35 year old male buried at the site had been scalped. Short clear marks were left on the front of the skull and along the level of the hairline and on the left side of the skull. Three chipped stone arrowheads were found with the individual, one between the ribs and the others near the head. This is one of the few instances of scalping recorded for the Fort Ancient Culture, others being recorded for Fox Farm in Mason County and Hardin Village in Greenup County.

The individual at Larkin is depicted here as the victim, just moments before his scalping. His bow lies near his left side. His aggressor stands triumphant over his body. The later wears bracelets and anklets, and a skirt or breechcloth of furs or animal tails. In his right hand he holds the scalping knife, in his left, a shield made of hide stretched tight over a circle of bent wood. The outside of the shield is adorned with four feathers. The victor has a quiver of arrows hanging across his right shoulder and a pouch hanging across his left shoulder that criss-cross his chest.

Time-specific Scene 12 - Fort Ancient Culture: Historic Period Indian

This is the last scene of the poster. It reflects the fact that native peoples were still living in

Kentucky when peoples of European descent arrived in the New World. It also illustrates the changes native cultures underwent and endured in the Historic period, such as the effects of infectious diseases (to which the groups had no natural immunity), changes in trading patterns, and changes in technology.

This Shawnee man stands in front of his house, dressed in the native attire of the late 1700s. Much of his deerskin clothing, except for his footwear, has been replaced with items of European manufacture acquired in trade with the French or the English. His left shoulder is covered with a European-made blanket. He wears a blue cloth shirt and breechcloth, red cloth leggings and red garters. The lobes of his ears have been stretched into loops and they dangle on his shoulder. He wears earrings of silver in those loops and a wide silver arm band with a feather on his exposed arm. He leans on his flintlock musket.

The house in the background shows influences of both native and European building techniques. Made of wood, it has a pitched roof supported by interior posts. The roof is shingled and the walls are wooden planks, but the wall supports are poles driven into the ground.

Technology Scenes

Regional stylistic differences in both pottery and points continue from the Woodland period into the Late Prehistoric period. Native manufacturing techniques were not immediately deserted upon the arrival of Europeans late in the period. Groups continued to make tools and containers using native techniques after the first Europeans actually arrived in person in the Ohio Valley in the late 1600s and early to mid-1700s.

Pottery

Late Prehistoric peoples used pottery in the same ways as their Woodland ancestors did, for cooking, storage, serving, and in ritual. In both regions, native potters made their vessels out of a mixture of clay and crushed mussel shells, but a greater diversity of vessel forms and vessel sizes were made by the Mississippians, and this diversity starts at the very beginning of the period. A greater relative variety of vessel forms were manufactured by Fort Ancient potters after A.D. 1400, but still the variety was not the same as that of the Mississippians.

Illustrated in the western and southern timeline are examples of Mississippi Plain, Bell Plain, Kimmswick Fabric Impressed, Matthews Incised, variety Matthews, Matthews Incised, variety Beckwith, Matthews Incised, variety Manly, and Caborn-Welborn Decorated. These vessels were made in a variety of forms: wide, shallow pans; jars of various shapes and sizes; low shallow bowls with animal or human head attachments; jars with narrow openings; and hooded water bottles also with human or animal heads. Plates with wide rims have zigzag decorations incised or painted on their rims. The funnel (called Wickliffe Thick) near the lower part of the timeline may have been used in salt making, the hole in the base allowing the salty water to escape but retaining the salty earth. One Caborn-Welborn jar has a clay attachment in the shape of a frog. Textile impressions on the outside of Kimmswick Fabric-Impressed pans provide archaeologists with a glimpse of both the intricate as well as serviceable textiles Mississippian women produced.

Fort Ancient pottery seems almost modest in comparison to the ceramics of the Mississippians. Jars with handles, geometric designs, and cordmarked outer surfaces occur throughout the timespan, but a few other vessel forms appear after A.D. 1400. These include broad, shallow pans, hemispherical bowls -- some of which have animal effigy forms -- and colanders (bowl-like vessels with holes pierced completely through the base). Fort Ancient ceramics illustrated in the central and eastern timeline from earliest to latest include Jessamine Cordmarked, Baum Cordmarked, Fox Farm Cordmarked, Lees Plain, Madisonville Cordmarked, Madisonville Plain, Madisonville Grooved Paddle, Fox Farm Colander, Kenton Fabric-Impressed, Todd Plain, variety Fox Farm, Todd Plain, and variety Augusta.

Arrowheads and Other Stone Tools

For both of Kentucky's farming societies, small triangular arrowheads are used. The shapes of the bases and sides of these points change subtly during the period, and some regional differences are present, but in general the points are very similar. Most in both timelines are Madison points. Some of the arrowheads in western and southern Kentucky are notched (called Cahokia points) or are leaf-shaped (called Nodena points), while some of the points in central and eastern Kentucky have serrated edges (called Fort Ancient points).

An important difference in chipped stone tool artifacts is the production and manufacture of large stone hoes by the Mississippians. This unique Mississippian technological characteristic was discussed in more detail for this period under Time-specific Scene 2.

Major Themes In Kentucky Prehistory

Three main themes emerge from the study of Kentucky prehistory: cultural diversity, cultural development and adaptation, and cultural relativism. Each of these themes, which crosscut the time periods, are discussed below.

Cultural Diversity

Over the 12,000 years of Kentucky prehistory, native inhabitants pursued a variety of lifestyles. The main ones illustrated in the poster are: mobile hunter-gatherers, semi-nomadic hunter-gardeners, and permanent village farmers.

A variety of cultures and ethnic groups, many of which spoke different languages, are illustrated on the poster. In pursuit of these various ways of life, they placed emphasis on particular animals or plants according to their cultural preferences, time of year, and the resources available in their homeland. Villages and campsites were laid out according to many different

plans; distinct styles of spear and arrow points and ceramic vessel shapes were manufactured; a diversity of domestic structures were constructed; and a number of different religious beliefs were pursued across the millennia.

Cultural Development and Adaptation

Over time, Kentucky's prehistoric peoples learned how to best use the resources available to them in their homeland for their day-to-day lives. Prehistoric lifestyles changed as the people learned how to use these resources more effectively and efficiently. These changes were gradual, not abrupt. Later discoveries built upon the discoveries and knowledge of previous generations.

Value judgments must not be made regarding this increasing cultural and social complexity and the developments associated with it. The way of life of Kentucky's earliest inhabitants should not be judged any better or any worse than the way of life of the latest farming peoples. Increasing complexity isn't better or worse than simpler lifeways, it's just different.

This progression in lifestyle changes that archaeologists have documented in Kentucky's prehistoric past is illustrated on the poster as change in community size, technology, and subsistence. Changes over time in clothing and hair styles, house construction, and the native peoples' impact on their surrounding environment also are illustrated in the poster.

Community Size

The family was the basic social and economic unit throughout prehistory. In the Paleoindian period, the extended family was the largest common grouping, though larger groups came together occasionally for communal hunts. In the Archaic period, the extended family remained the essential social unit, but the size and arrangement of Archaic base camps, as shown by the Green River Shell Midden base camp, were different from that of the Paleoindian camp. In the Woodland period, the Pyles Site consisted of a circle of over a dozen dwellings. In the Late Prehistoric period, the fortified town of Jonathan Creek consisted of scores of dwellings, a plaza, and mounds. This community was made up of families organized into larger groups, called clans or lineages, which were themselves ranked.

Technology

The development of new technologies is illustrated on the poster through the activity scenes and as the progression of points and vessels in the technology scenes. The earliest prehistoric technology preserved in the archaeological record is that of chipped stone tool manufacture. The fluted points recovered from Paleoindian campsites attest to the craftsmanship of these early flintknappers. Often these points were manufactured from non-local raw materials, which shows an initial unfamiliarity with local chert resources.

Groundstone tool production was added to chipped stone tool technology in the Archaic period. Grooved axes, and then later adzes and celts, were manufactured using this technique throughout the succeeding Woodland and Late Prehistoric periods. Archaic period chipped stone tools were made of local materials, and spears were used with atlatls. Baskets and skin bags continued to be used as containers in the Woodland period, but the addition of ceramics provided

a greater choice of containers. The bow and arrow was developed in the latter part of the Woodland period, but spears were not discarded completely. By building on the accomplishments and technologies of their ancestors, the native technology of the Late Prehistoric period included chipped stone and groundstone tools, baskets, skin bags, and ceramic containers.

Subsistence Pursuits

The poster illustrates the main food procurement strategies and when these strategies first appear in the native way of life. Both hunting and gathering were pursued initially, illustrated by the scenes during the Paleoindian and Archaic periods. Gardening occurred next, in the Woodland period, as a supplement to hunting and gathering. Finally, farming appeared as a subsistence pursuit. Collecting wild plants and nuts as well as hunting animals continued, supplementing the products of the fields.

Cultural Relativism

The native peoples of prehistoric Kentucky represent the kinds of cultures found the world over. They share important characteristics with all traditional peoples. The poster illustrates aspects of day-to-day life that all cultures and all peoples face: the quest for food, home construction, tool and possession manufacture, spiritual beliefs, art, death, recreation, discovery, work, travel, family. Kentucky's hunting and gathering peoples shared similar lifestyles and social and political characteristics with hunting and gathering peoples elsewhere, despite differences in language and environmental resources. Kentucky's native gardeners and farmers also are comparable to native gardeners and farmers elsewhere.

By studying the ways of life of Kentucky's native peoples, we can gain a measure of these peoples' place in the world. Though gone now, the similarities between these cultures and others around the world, and between these cultures and our own society, illustrate how much all humans share, be they past or present.

Sections in this unit are adapted from: Kentucky Before Boone: A 12,000-Year Journey Through Kentucky's Past; A Poster Companion Booklet; Native Americans: The People and How They Lived; Kentuckians Before Boone; and Archaeological Survey of Kentucky. All are listed below.

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Classroom Activities
prepared by Kentucky educators

Paleoindian Period

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future. 3.4: Students will demonstrate the ability to be resourceful and creative.

Discuss the nomadic lifestyle of the Paleoindians. Create lists of items that Paleoindian groups would have needed in their camps (tools, personal possessions, clothing, shelter).

Prepare the class for a camping trip in the Kentucky woods today. Assign tasks to members of the group, e.g., who will be responsible for food and drink? who will handle shelter needs? etc. Create lists of supplies needed and who will carry them. Traveling as a group and camping for an extended period of time (several months), what personal belongings would you want to have with you? What sacrifices must you make to be able to effectively manage all you must carry? How does the group decide the possessions each individual may bring? Develop strategies to utilize the resources from nature around you. Compare and contrast the strategies for planning and executing a temporary camping trip with those for a nomadic prehistoric lifestyle. **(P, PE, OE--Elementary, Middle)**

2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.

Investigate the climate, flora and fauna of the Paleoindian Period. How did these factors affect the way people lived during this time? Create a mural showing the results of your research. **(PE, OE, P--Middle, High)**

2.1: Students use appropriate and relevant scientific skills to solve specific problems in real-life situations.

Invite a flintknapper or groundstone tool maker to visit the class (check with the archaeology or anthropology departments at universities, local museums, historic sites, and related state and federal agencies [Kentucky Heritage Council, U.S. Forest Service] where people study ancient stone tools or check with local archaeological organizations to find demonstrators). Be certain that the flintknapper practices ancient techniques using bone and stone tools and is able to explain ancient stone technologies as he/she works.

Prepare a collection of various types of rocks. The class should examine the rocks and decide which ones might make the best chipped stone tools. Which rocks will flake easily to make points? Ask the flintknapper to strike the various stones. What types of fractures occur?

Ask to see and feel various kinds of stone tools. Have the flintknapper demonstrate the effectiveness of scrapers and cutting tools. What tasks would these tools effectively accomplish? Would they be effective for piercing animal hides? for chopping down trees? for cracking nuts? Why does the flintknapper have an interest in preserving these ancient tool technologies?

Compare the technologies of flintknapping (chipping stone) with the technologies of making groundstone tools, such as axes and celts. Look in your collection of rocks for specimens which will make effective groundstone tools. Why? How do they differ from the flintknapper's choices? What is the relative hardness of each of these stones? Does this help to determine the best types of stone for these various tools? What other properties of the stones make them suitable for certain tasks? Create charts compiling all of your findings. **(PE, OE, P--Middle, High)**

Archaic Period

2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Consider the elements of religion and ritual described in the Archaic section of this unit and view Time-specific Scene 3 on the poster. List the elements of the ritual activity depicted: dance, ceremonial tools, use of natural materials from animals (teeth, feathers), ceremonial costumes, pipes, masks, valued goods obtained through trade. What elements of this Archaic ritual are common to rituals in other world cultures, both ancient and modern? Provide visual examples and written descriptions of the ceremonial items and ritual practices of these other cultures. Describe the elements of modern religious practices that relate to the ancient religious practices you have discussed. Chart the Archaic ritual elements discussed above and create a parallel column for like elements of a modern religion with which the students are familiar. Are you able to find a parallel element for each of the Archaic ritual elements? What dance elements exist in the modern religious rituals? What are the ceremonial tools or costumes? **(P, OE--Middle, High)**

Examine and discuss Time-specific Scene 4: the Late Archaic burial ritual. Compare this scene to Time-specific Scene 3 from the Woodland section (the Middle Woodland Burial Mound) and the Mississippian burial in Time-specific

Scene 7 from the Late Prehistoric section. Research and discuss the burial practices of other ancient and modern world cultures. What role does the social status of the deceased play in these practices? What elements are similar across cultures (valuable burial goods, raised structures [mounds, pyramids], symbolic images)? How do modern burial practices relate to these ancient ones? Does social status influence burial customs today?

End this lesson with a discussion of the problems of grave looting. Research newspapers from the last few years to find articles about grave desecration and looting for profit and private collection in Kentucky (or your state). Investigate the current laws in your state regarding the protection of burial sites. **(P, OE--Middle, High)**

4.3: Students individually demonstrate consistent, responsive, and caring behavior.

Research rockshelters that were used during the Archaic Period. Where are they located? When were they used? How big were they? How and why were they used? What evidence of human presence has been found there?

Vandalism is destroying many of these valuable sites. Investigate efforts made to preserve and protect Kentucky rockshelters. Write a letter to the newspaper editor explaining the value of rockshelters in understanding the culture of the Archaic Period. What might a student due to promote cultural understanding of the value of these sites? **(OE, PE, P--Middle, High)**

Woodland Period

2.27: Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they interrelate.

Beginning with the Gaitskill Clay Tablet illustrated on the Kentucky Before Boone poster, collect images from various world cultures and periods of history that represent highly stylized human and animal forms. For example, consider images from modern Native American cultures in the Pacific Northwest, from traditional African cultures, from Germanic cultures of the Middle Ages, as well as additional examples created by Woodland peoples. In these depictions, how are forms simplified to express the essence of the creature represented? With charcoal or graphite, have the students create singular, stylized animal forms using geometric shapes, simple lines, and just a few essential features. Next, develop more complex compositions combining two interrelated animal or human forms.

Discuss the compositional arrangement and symmetry of the Gaitskill Clay Tablet and others like it. Have the students create a zoomorphic design within the confines of a regular geometric shape (a rectangle, square, circle, triangle, etc.). The image should fill the entire defined space, conforming to it in a controlled, stylized way. Woodland clay tablets may have been used as stamps or seals. Students can create relief images on surfaces such as clay, wood, or even a potato and use the surface as a stamp. Enhance the block printing process by creating natural inks from berries, earth, charcoal, etc. **(P, PE, OE--Elementary, Middle, High)**

2.22: Students create products and make presentations that convey concepts and feelings.

Develop an ancient pottery activity involving simple coiling techniques to create a jar. Begin by forming a shallow depression in a lump of clay to create the base. Then take long, even coils of clay and shape them to form the sides of the vessel. Use the paddling technique shown in Woodland Activity Scene 1 to join and smooth the coils. Experiment with carved paddle surfaces and twine or other fibers wrapped around the paddle to give the jar a textured surface.

Try other methods of surface decoration using natural materials (incising designs with a pointed stick, creating a dentate stamp by rocking a shell with a notched edge across the surface, repeating the punctuations of a hollow reed in a pattern). Compare the various pottery shapes, patterns, and functional forms shown on the poster. **(P, PE, OE--Middle, High)**

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
3.4: Students will demonstrate the ability to be resourceful and creative.

Your class is going to take a trip to visit the sites of Native Americans who once lived in Kentucky during the Woodland Period. You have been learning about how prehistoric people survived in the wilderness, what they ate, what they used in nature and why. Your teacher has brought in a box of articles for the trip. It is your task to take care of this box and give out the things inside during the trip, as needed. Your teacher tells you, "Don't lose this box. It contains things we will need on our trip." What is in this box and why will these things be important? Be specific.

To develop a portfolio activity following this idea, have students construct their own box of supplies using illustration cards made from magazine cut-outs

and/or drawings. Write a piece about the contents of your supply kit and why each is important. (OE, P--Elementary)

Research tobacco today and during the Woodland Period. What are the physical differences in the plant itself? How is/was it grown? How is/was it used? What effect does/did it have on the economy? Why is/was it used? Interview a farmer who grows tobacco today. In addition to the previous questions, what does he feel about the controversies involving tobacco and health and public smoking issues? Summarize the findings from the research in a writing piece comparing tobacco in culture then and now. (PE, P, OE--High)

Divide the class into small groups. Assign one of the following minerals to each group: gypsum, mirabilite, selenite, or satinspar. What are these minerals? How were they used during the Woodland Period? In what other times in history have people mined in Kentucky? What did they seek (saltpeter for gunpowder, coal, etc.)? Are these minerals mined in Kentucky today? Each group will report their findings to the class. (PE, P--High)

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Write a piece for your portfolio that compares the petroglyphs and pictographs of the Woodland Period with those of another culture. Create a poster with examples of each. As a class, discuss the significance of similarities and differences, especially if the other culture(s) explored were geographically distant from Woodland Indian cultures. (P, PE, OE--High)

Late Prehistoric Period

2.22: Students create products and make presentations that convey concepts and feelings.

Beginning with the Fort Ancient gorget illustrated in Time-specific Scene 10, collect images of various examples of the weeping eye motif. Prepare line drawings of several of these powerful and fascinating images of stylized human faces with lightning bolts or tear streaks extending down their cheeks. Discuss the feelings that the students express as they study these images and speculate about their meaning or function. How do these images make them feel? What do they say about the people who created them? Does your impression of these

images change if you consider the zigzagging patterns as lightning bolts, rather than tears?

Students will create their own weeping eye motifs, drawing upon the historic models. Using similarly expressive and simplified techniques, students will then create personal symbols that express their own ideas or feelings, personal icons which may also relate to more universal concepts.
(P, PE, OE--Elementary, Middle, High)

Discuss how Native American designs and art reflect their culture and society. Create designs or patterns that reflect our culture or society today using ancient materials such as clay or charcoal (brown craft paper makes an acceptable substitute for leather, especially when it is covered with polymer varnish after the images have been created). As an alternative, ask students to create their designs using modern materials which may be more reflective of our culture today. Be creative! Students will present their completed works to the class and discuss their choices and the meanings of the symbols. **(P, PE--Elementary, Middle)**

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Using available statistics, compare the life expectancy and infant mortality rates of the Late Prehistoric Period with another time period in history. What does this comparison tell you about the two cultures? their medicine? their diet? their education? How much of this is speculative and how much is factual? What leads you to make certain assumptions? Summarize this work in the form of a written report with charts and other graphics. **(PE, OE, P--High)**

Major Themes and Ideas in Kentucky Prehistory

1.11: Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through writing.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.
6.2: Students use what they already know to acquire new knowledge, develop new skills, or interpret new experiences.

Students will create a daily journal of a Native American in Kentucky during a specific time period. Each day they will complete an entry that re-interprets and records the daily events of their own lives as they may have occurred to a prehistoric Kentuckian, drawing parallels between the lives of past Native

American children and the students themselves and exploring contrasts. (P--Middle)

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
5.3: Students create and modify their understanding of a concept through organizing information.

Create a timeline form, beginning with 12,000 B.C. and ending with A.D. 2,000 (the timeline at the end of this publication and the timeline in the *Courier-Journal* Educational Supplement, "Native Peoples, Continuing Lifeways Exhibition Gallery Guide & Activity Book," will help you). Mark off the following eras: 12,000-8,000 B.C.; 8,000-1,000 B.C.; 1,000 B.C.-A.D. 1,000; A.D. 1,000-1,700. Do not name these periods on your form but leave a blank line beneath each. (Note: These dates given for the time periods reflect the dates preferred by the author of this chapter. The Kentucky Before Boone poster defines the end of the Paleoindian and the beginning of the Archaic periods as circa 7,000 B.C. Either set of dates is acceptable, but the discrepency may be explained to students as different opinions regarding somewhat arbitrary categories. The beginning or ending of time periods or cultures is rarely tied to certain events or dates.)

Arrange the students into groups of four and give one timeline form to each group. Have each group look at the timeline and fill in the names of the time periods marked. Each person in the group should select one time period. Using a 3 x 5" index card, students will write the beginning and ending dates of that time period, along with its name. They will then write a word about some aspect of Kentucky Indian life, such as food, travel, pottery, camp/village, etc. They will then write a question about this word that they want another person in the group to answer. On the back of their card, they will write the answer to the question.

The next part of this activity is done individually. The students will exchange cards within their group of four. Each student will write an answer to the question beneath the question on the front of the card. They will then check the back of the card to see how closely the answers match. The students will re-join their groups and read the two answers they worked on. The group should discuss: Do both answers match? Are both answers correct? Does either answer miss important information or views? (PE, OE--Elementary)

2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.
2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Describe the lifeways of each of the four major time periods in Kentucky prehistory. Why is it important to study the lifeways of native peoples who lived in Kentucky before the arrival of Daniel Boone? Create a trash heap for each of the four periods of Kentucky prehistory. Include artifacts indicative of the period. Then reach a consensus as to what artifacts could be found in a trash heap for today's culture. Include why these items are important enough to explain our culture to someone in the future. Develop a chart that categorizes the contents of the various trash heaps (with columns for Paleoindian, Archaic, Woodland, Late Prehistoric, and Today) and illustrates evolution or change over time. What kind of categories can you use to allow for comparisons to be made between the columns? **(OE, PE, P--Middle, High)**

1.1: Students use research tools to locate sources of information and ideas relevant to a specific need or problem.
2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.
2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.
2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

Research one of the many sites featured on the Kentucky Before Boone poster and in this chapter. Select a site close to your school. Create an exhibit for the school or the local library or historical society about this site. Include information about related publications and state collections that house artifacts from the site, drawings or three-dimensional recreations of artifacts found at the site, interpretive illustrations of lifeways there, and information on the preservation efforts at this site. Include recent photographs of the site if possible. Create an interactive component for the exhibit (hand's on activity for visitors, question-and-answer computer program or printed piece, or exhibit graphic encouraging visitors to answer specific questions. This exhibit should celebrate the importance of the site, while educating visitors about the importance of preservation and protection. Explore ways to excite the audience about the archaeological resources of your area without encouraging amateur artifact hunting or digging at this or other sites. **(PE, P--High)**

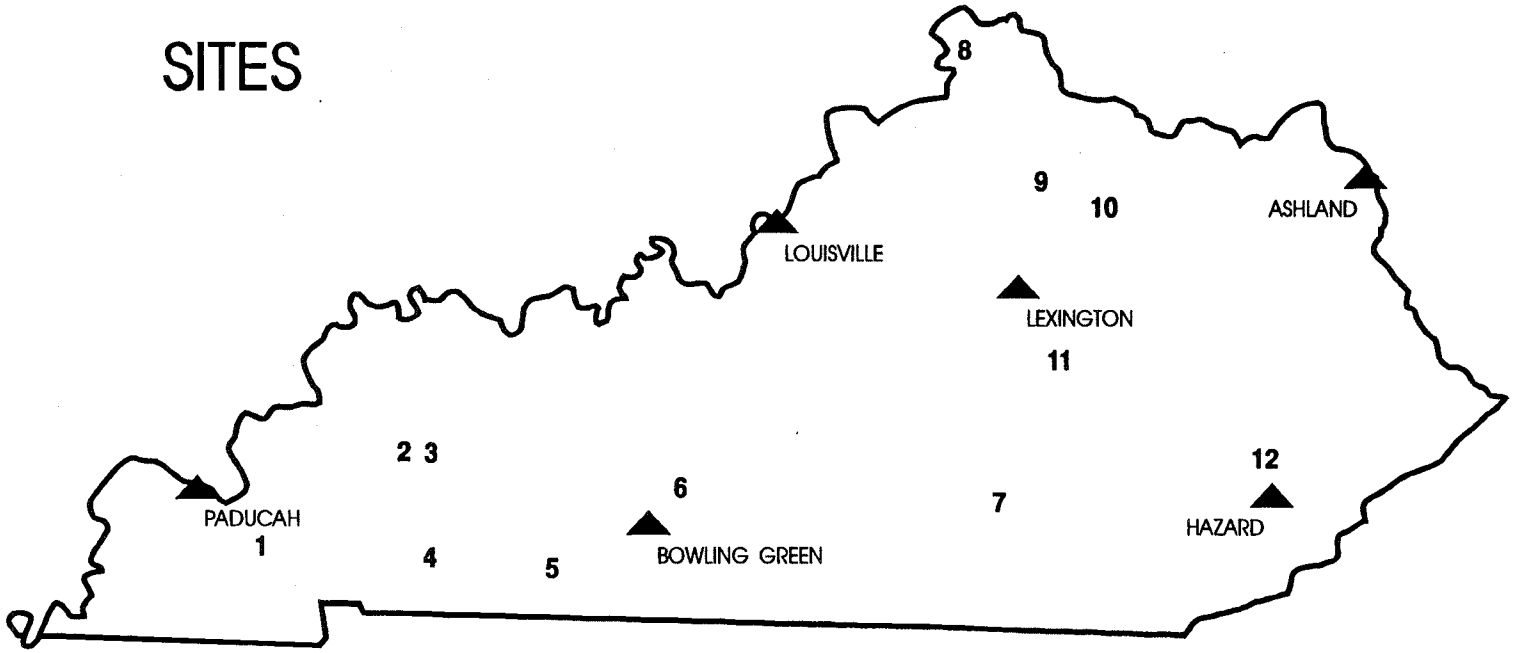
1.11: Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through writing.

Give the students a list of appropriate vocabulary from this section (i.e., radiocarbon dating, tumplines, flute, shell midden, etc.). Have them create an acrostic. This requires them to summarize, organize, and synthesize these words. Students will work on this in small groups. The first letter of the term will be used to begin the first line of the acrostic; the second letter of the term begins the second line, and so on, until the word is spelled vertically down the page. The lines must relate to the term in a logical way. **(PE--Middle, High)**

1.16: Students use computers and other electronic technology to gather, organize, manipulate, and express information and ideas.
2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.

Create a timeline using the computer software Timeliner from Tom Snyder Productions. Include the four time periods in this section. Each time period should be illustrated with at least three artifacts related to that period. **(PE, P--High)**

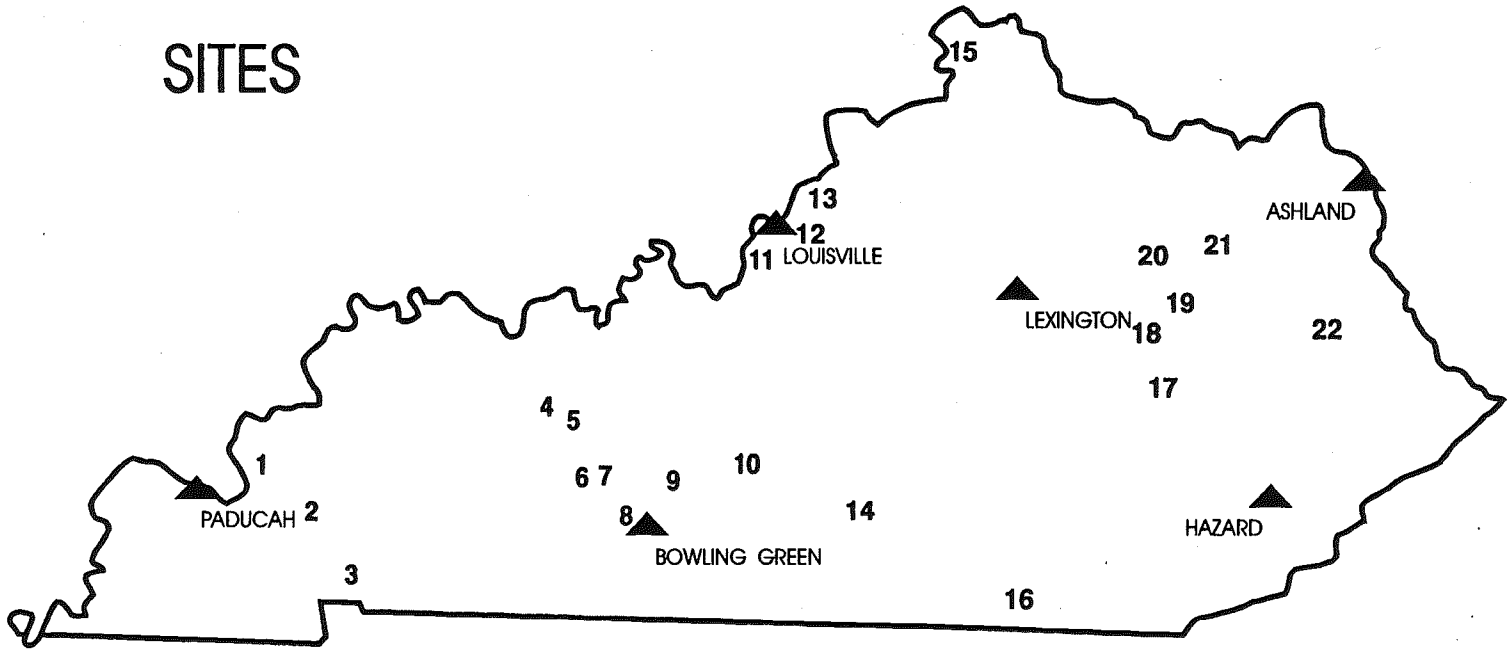
IMPORTANT PALEOINDIAN PERIOD SITES



1 Henderson	5 Savage Cave	9 Adams Mastodon Site
2 Morris	6 Blue Spring Hollow	10 Upper Blue Licks
3 Parrish	7 Great Rock Sink	11 Clays Ferry Crevice
4 Adams	8 Big Bone Lick	12 Enoch Fork Rockshelter

MAP 1

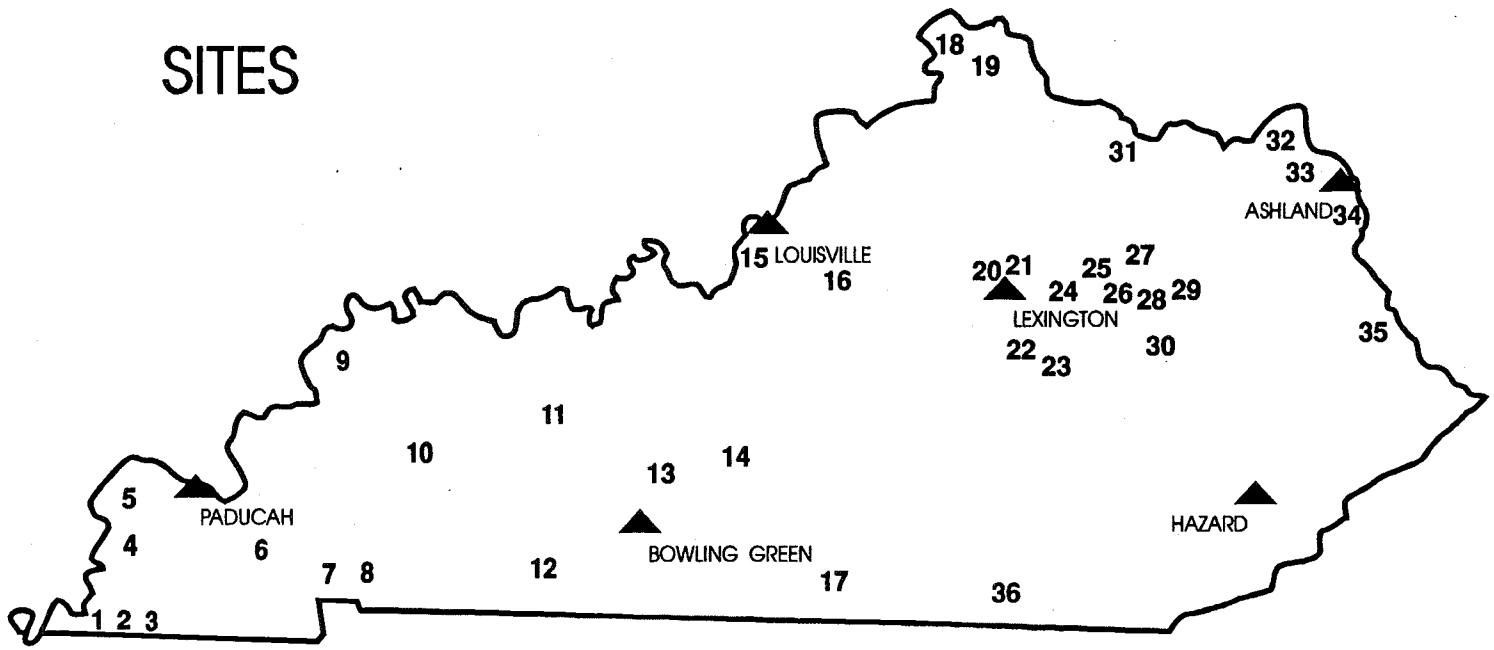
IMPORTANT ARCHAIC PERIOD SITES



1 Morrisroe	8 Crumps Cave	15 Glacken
2 Whalen	9 Mammoth Cave	16 Tough Tree Rockshelter
3 Lawrence	10 Salts Cave	17 Cold Oak Rockshelter
4 Indian Knoll	11 Longworth-Glck	18 Skidmore
5 Chiggerville	12 Rosenberger	19 Cloudsplitter Rockshelter
6 Carlston Annis	13 Ashworth Rockshelter	20 Zilpo
7 Read	14 Rogers Cave	21 Deep Shelter
		22 Dameron Rockshelter

MAP 2

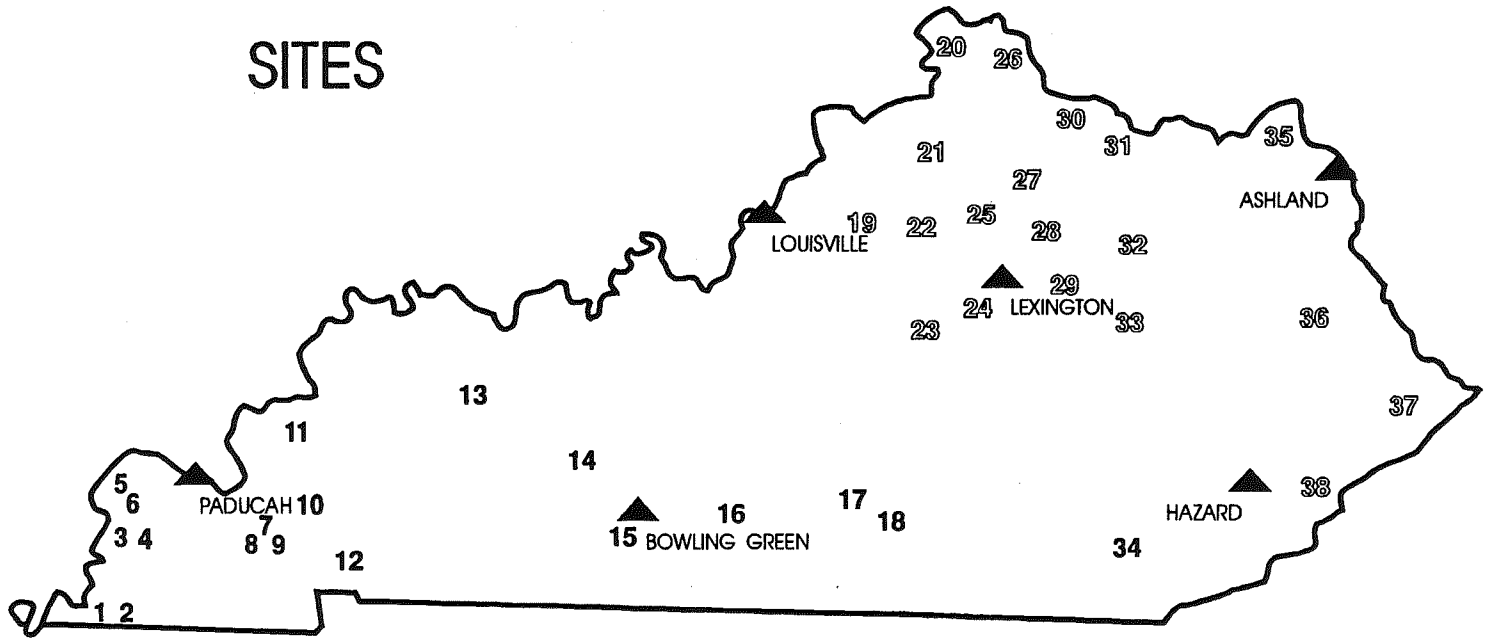
IMPORTANT WOODLAND PERIOD SITES



1 O'Byams Fort	8 Lawrence	15 Arrowhead Farm	22 Bogle Circle	29 Hooton Hollow Rockshelter
2 Amburg Mounds	9 Slack Farm	16 Old Bear	23 Robbins Stone Mound	30 Rogers Rockshelter
3 Rice	10 Jones Mound	17 Wolfe River Rockshelter	24 Nelson Gay Mound	31 Pyles
4 Indian Camp Lake	11 Pleasant Point	18 Robbins Mound	25 Wright Mounds	32 Old Fort Earthworks
5 Sandy Slough	12 Watkins	19 Gibson Greeting Card	26 Gaitskill Mound	33 Hansen
6 Dedmon	13 Blue Springs Hollow	20 Mount Horeb	27 Morgan Stone Mound	34 Stone Serpent Mound
7 Roach	14 Salts Cave	21 Peter Village	28 Newt Kash Rockshelter	35 Calloway
				36 Singer

MAP 3

IMPORTANT LATE PREHISTORIC PERIOD SITES



1 Sassafras Ridge	8 Chambers	15 Dunklau	23 Mercer Village	31 Fox Farm
2 Adams	9 Dedmon	16 Jewell	24 Muir	32 Roberts
3 Marshall	10 Tinsley Hill	17 Corbin	25 Dry Run	33 Martin
4 Turk	11 Papineau	18 Rowena	26 Bintz	34 Croley-Evans
5 Wickliffe	12 Roach	19 Casey	27 Florence	35 Thompson
6 Twin Mounds	13 Kirtley	20 Cleek-McCabe	28 Buckner	36 Mayo
7 Jonathan Creek	14 Annis Village	21 Green	29 Goff	37 Sloan
		22 Capitol View	30 Snag Creek	38 Crase

1 Sassafrass Ridge denotes Mississippian Culture sites
19 Casey denotes Fort Ancient Culture sites

MAP 4

Chapter 3

The Prehistoric Farming Cultures of Kentucky: Contrasts and Comparisons

by A. Gwynn Henderson and David Pollack

Introduction

The last native groups to live in Kentucky before Euro-Americans arrived in the eighteenth century were village farmers. Archaeologists call the groups in the western and southern parts of the state Mississippian and those in the central and eastern parts of the state Fort Ancient. These names undoubtedly subsume a number of different tribal and ethnic groups, as well as several language families. Unfortunately, we do not know how many different ethnic groups once lived in Kentucky nor do we know the names they called themselves. What we do know is that from about A.D. 1000 to 1750, native people living in Kentucky subsisted mainly on the foods they grew. Archaeologists estimate that corn accounted for about 60% of their diet. Both Mississippian and Fort Ancient groups lived in large permanent settlements, exchanged perishable and non-perishable goods with other groups, and had a rich ceremonial life. Mississippian and Fort Ancient farmers also had different lifestyles and social and political systems and probably spoke very different languages.

Kentucky's village farming groups are the focus of this unit. Looking closely at the native cultures of a particular period, in this case the Late Prehistoric Period (A.D. 1000-1750), illustrates the diversity of lifeways pursued by native peoples in Kentucky prior to Euro-American settlement. These people share much in common with many of the Historic Indian groups in the Ohio Valley described by the traders, explorers, and settlers, and they share general cultural characteristics with other non-industrialized farming peoples all over the world.

By examining Kentucky's prehistoric village farming cultures, students will study and see things that may relate to their own experiences, for the comparison between prehistoric village farmers and the farmers of Kentucky today is a compelling one. The similarities are real. Kentucky is still a state of family farmers. Even some of the crops that are grown are the same. Comparing and contrasting prehistoric and historic farming communities may make the past easier to understand and may help students recognize local cultural diversity within their own communities, county, and state. Studying the prehistoric farming cultures of Kentucky can show students that they need not go to a far away place to find people with customs different from their own.

This unit will outline the similarities and differences between Kentucky's native farming peoples during the middle portion (A.D. 1200 to 1400) of the Late Prehistoric period, before these cultures felt the biological, technological, and cultural effects of interaction with Euro-Americans. Although Mississippian farming communities are found throughout western and southern Kentucky, the focus here will be on the Jackson Purchase region of western Kentucky.

Likewise, the Fort Ancient discussion will focus on the Bluegrass region of central Kentucky, even though Fort Ancient village sites are found along the Ohio River and throughout eastern Kentucky.

These descriptions are drawn from current archaeological research in Kentucky and the Eastern Woodlands. Descriptions of the native inhabitants of the Eastern Woodlands by Euro-American explorers also were consulted. Native farming peoples like those living in Kentucky lived in the Northeast and Southeast when the Euro-Americans first arrived. Thus we have access to information about their ways of life that can be used to fill-out the framework set up by archaeological research. This information is derived in part from the journals, diaries, reports, and letters of traders and explorers. Many of these documents have been studied by ethnohistorians, people who specialize in researching native lifeways by analyzing descriptions provided by Euro-Americans.

This unit begins with a brief description of the lifeways of Kentucky's native peoples before the Mississippian and Fort Ancient cultures emerged. This will provide some background concerning how these two different regional cultures could have developed. The rest of this packet presents an overview of the similarities and differences between Mississippian groups in western Kentucky and Fort Ancient groups in central Kentucky. The overview begins with some general background information on both groups and the environments within which they lived. This is followed by discussions of settlements and housing, subsistence, material culture, social and political organization, trade and exchange, and health.

Background

The lifeways of the Mississippian and Fort Ancient peoples in Kentucky were grounded in the cultural histories of their ancestors. Therefore, in order to understand the nature of the differences between these two farming societies, it is important to have a perspective on the cultural developments that preceded A.D. 900.

The first people to live in Kentucky, the Paleoindians, arrived from the west or north sometime after 12,000 B.C. They lived in small mobile groups within large territories, hunting woolly mammoths, mastodons, and other animals, and foraging for plant foods. The climate was much colder and wetter than that of today, more like that of the Subarctic region of Canada.

As Kentucky's climate improved and became more like it is today, generation upon generation of people living in Kentucky learned about its resources. Native lifeways became more complex and varied. Kentucky's Archaic peoples were hunters and gatherers, moving in cycle with the seasons to exploit available food resources. They hunted deer, fished, and gathered freshwater mussels. They collected wild plants for food (especially hickory nuts) and for medicinal purposes. They experimented with growing their own food by encouraging squash to grow in the trash heaps near their base camps. Group size increased during the Archaic period, as did Kentucky's overall native population. Toward the end of the Archaic period, marine shell and copper objects placed with some burials reflect the establishment of long distance exchange networks and the

beginnings of some kind of social differences within Archaic society.

The Woodland peoples expanded their Archaic ancestors' experiment in domesticating plants and soon became part-time gardeners. Garden products included squash and the Eastern Agricultural Complex (starchy seeds - goosefoot, maygrass, knotweed, little barley; and oily seeds- sunflower and sumpweed seeds), but these plants still represented only one dietary component out of many others, which consisted of meat, fish, nuts, and edible wild plants. Woodland people made ceramic vessels, and variation in vessel form and decoration reflect regional and temporal differences. These differences point to the development of distinctive cultures, each with its own culture history.

Some groups continued to lead mobile lives, while others chose to live in more permanent villages. The large burial mounds and earthen enclosures built during the middle portion of the Woodland period reflect a complex ceremonial life. Exchange of ritual items, like mica and marine shell, with groups outside the Ohio Valley points to Woodland peoples' participation in extraregional trading networks and tells us something about their religious beliefs.

During the latter part of the Woodland period, there was a decline in mound and earthwork construction and a decrease in extraregional exchange. At the same time, people became more dependent on domesticated plants. After A.D. 800, the bow and arrow replaced the spear as a hunter's weapon of choice, and by around A.D. 900, corn had become a dietary staple. A greater reliance on plant foods tied these later Woodland peoples more directly to the land. In the Jackson Purchase region, the ancestors of the Mississippians had begun to live in large villages located on the bluffs overlooking major rivers and near fertile floodplains. In contrast, the ancestors of the Fort Ancient people were living in small scattered settlements on ridgetops near streams or springs.

Late Prehistoric Kentucky Farmers

As native peoples had done before them, Kentucky's Mississippian and Fort Ancient farmers built upon the traditions of their ancestors. After around A.D. 900, they became increasingly dependent on corn, which they grew in fields located near their settlements. But they didn't just shift from using wild plants to domesticated varieties. They intensified the exploitation of certain wild *and* domesticated plants, while decreasing their utilization of other plants. In this manner, they based their decisions on both environmental considerations and cultural preferences.

Kentucky's village farmers had much in common. They depended heavily on the plants they grew to meet their needs for food, unlike their Woodland predecessors for whom cultivated plants were generally only one of many food resources. Both Mississippian and Fort Ancient farmers hunted, fished, trapped, and collected wild plants and nuts to supplement their diet of domesticated plants. They built permanent communities and lived close to their relatives and other family members. In these respects, as well as in many other respects, these two farming cultures were alike. For example, important similarities can be found in their material culture, such as the tools and ceramic vessels they used and the objects of personal adornment and fabrics

they wore.

But important cultural differences existed, too. These differences were rooted in their regional culture histories and bounded by the characteristics of the surrounding topography and environment. Within Mississippian society, power rested in the hands of an elite class and was passed along kin lines from one generation to another. Archaeologists classify these societies as chiefdoms. In Fort Ancient society, leaders did not inherit their positions. Instead, they had to achieve leadership positions through personal actions and accomplishments. Thus, Fort Ancient society is viewed by archaeologists as being more egalitarian than Mississippian society. Such societies are classified as tribes.

The Land

The Jackson Purchase area of western Kentucky is a land of flat bottomlands or gently undulating uplands. Part of the Mississippi River and lower Ohio River floodplains, this is a region of sloughs, oxbow lakes, and wide, slow-moving streams. The floodplain soils are very fertile, enriched each winter and spring by the floodwaters of the region's major rivers. The loess (wind-blown sediments) bluffs along the Mississippi River have moist, fertile soils, too. Thus both floodplain and upland soils were well-suited for farming.

Varieties of vegetation extend into this region from the south, making this portion of Kentucky more like Mississippi or Tennessee. The wet bottomlands supported hardwood forests and cypress sloughs, while oak-hickory forests and barrens or prairies were located in the uplands. The existence of the prairies owed much to the effects of fire, set naturally and by the native inhabitants of the region. Thick stands of cane grew in the forests along the bluffs of the Mississippi River. Western Kentucky lies along the central flyway of migrating birds.

The Bluegrass region of central Kentucky consists of a series of broad ridges cut by the drainages of the Kentucky and Licking rivers. The valleys are narrow, when compared to those of western Kentucky, and the rivers move more swiftly. Good soils developed on the uplands and narrow bottomlands, underlain by the phosphorous-rich limestone bedrock of the region.

Vegetation of the Bluegrass region consisted of woodlands. The areas of richer soils were more thinly wooded with distinctive amounts of walnut, sugar maple, and ash trees. Dense stands of cane, in the open or under trees, grew on the bottomlands and on some ridges. Native peoples' use of fire to clear fields may have directly affected the Bluegrass vegetation, especially the existence of extensive canebrakes. In his study of prehistoric salt production, Ian Brown states that an "incredible amount of extremely weak" salt springs occurred in central and northeastern Kentucky, part of the Eastern Salt Basin or Salina Basin. A web of game trails criss-crossed the region, linking these weak saline springs and licks. Open grassy areas were associated with these trails.

Settlements and Housing

The Mississippian farmers had a hierarchical settlement pattern. This means that a variety of sizes of habitation sites were linked together politically, economically, and socially into one unit. The smallest settlements were the farmsteads and hamlets. Farmsteads consisted of individual households (5 to 7 people), while hamlets usually incorporated three or four households (15 to 28 people). Both farmsteads and hamlets were located near the fields. Villages with or without an earthen platform mound were much larger, consisting of 50 to 70 houses and inhabited by 250-300 people.

Towns were the largest settlements and were the centers of religious and political life. The leaders of each town controlled not only those living in the town, but also the residents of the surrounding farmsteads, hamlets, and villages.

Towns consisted of two or more mounds, a plaza, and the residences of the elite and commoners, which in some cases numbered in the hundreds. As many as 3,000 people could have lived in the largest Mississippian towns. The mounds were large flat-topped pyramids of earth. Ceremonial structures or chiefly residences were built on top of the mounds. A large open space or plaza, where people gathered for ceremonies or trading, was located in the town center, with the mounds usually placed adjacent to the edge of the plaza. Clusters of houses representing related families were scattered throughout the town. Some Mississippian towns and villages were stockaded (surrounded with a wooden barrier). Stockades were made of logs driven into the ground.

Cemeteries were located within the towns, but elite graves were usually located in an area distinct from the graves of low status individuals. Grave goods such as marine shell gorgets were often interred with high status individuals. These items reflected their owner's social status within the community. Non-elites often were interred with items of daily use or with ceramic vessels that may have contained food offerings.

Mississippian houses, whether in farmsteads, hamlets, villages, or towns, were made of wattle (a wooden stick framework) and daub (clay mixed with grasses). Wall support posts were placed in trenches along the house perimeter. Frameworks of saplings and branches were plastered with daub to form the house walls. Larger tree branches or trunks supported thatched roofs. These structures were usually square, but some were rectangular. They ranged in floor space from 144 to 225 square feet. Elite residences on top of the platform mounds were larger than the homes of the other town residents.

The Fort Ancient farmers lived in villages that contained 25-30 houses and from 150-250 people. Villages were usually circular, consisting of a ring of houses around a central plaza. In summer, everyone lived in the village. But in the winter, the able-bodied men, women, and older children moved into hunting camps located within 20 to 40 miles of the village. These hunting camps were small, consisting of 10-15 people and were occupied by an extended family. Within a region, villages may have been linked socially and economically, but each village was an autonomous political unit. There was no hierarchy of settlements as there was in western

Kentucky.

Low earthen burial mounds were located on the inside edge of the plaza. These mounds and a zone around the plaza between the plaza and the houses served as the cemetery. The placement of some individuals in the mound may reflect their achieved status within the community. Fort Ancient people of this time period rarely placed objects in the graves of their dead kinsmen. When they did, the objects tended to be utilitarian items such as a quiver of arrows or items of personal adornment such as bone beads.

Fort Ancient houses were often built in shallow basins. Wooden posts serving as wall supports were driven into the ground around the perimeter of the house along the edge of the basin. Frameworks of saplings and branches formed the walls and roofs. These were covered with sheets of bark, woven mats, or skins. Fort Ancient houses were generally square, measuring 12 by 12 feet.

Subsistence

Both Mississippian and Fort Ancient peoples grew a variety of plants, hunted mammals, birds and reptiles, fished, and collected wild plant foods and nuts to meet their subsistence needs. However, they did not always emphasize the same foods. Some of these subsistence differences are related to the availability of certain plants or animals within their home region, while others relate to the food preferences of Mississippian and Fort Ancient people.

Plant Foods

The primary focus of Late Prehistoric plant food subsistence was corn. Other domesticated plants included beans; starchy-oily seeds, such as goosefoot, maygrass, and sunflower; squash; gourds; and tobacco. Archaeologists distinguish domesticated from nondomesticated varieties of the same plant by the size of their seeds and whether the plant is found outside its native range. Domesticated plants tend to have larger seeds than their nondomesticated counterparts, and plants found outside their native range will not survive on their own. Nuts and wild plants (greens, fruits, and berries) also were collected.

Mississippian farmers grew a 12-row variety of corn known as Midwestern 12. They do not appear to have relied on corn to the same extent as Fort Ancient farmers. Nor did Mississippian farmers grow domesticated beans in large amounts, though they collected wild beans. Mississippians did, however, grow plants that produced starchy-oily seeds, such as maygrass, erect knotweed, and goosefoot. These are some of the same plants that their Woodland ancestors had domesticated and grown in their gardens for the hundreds of tiny seeds each plant bore. The leaves of these plants probably also were eaten. These plants, which are considered weedy intrusive species today, made a greater contribution to the Mississippian diet than they did to that of Fort Ancient peoples. Nuts (hickory nuts, pecans, walnuts, and acorns) also were an important part of the Mississippian diet. Other wild plant foods, such as persimmons, cherries, plums, and hackberries, were eaten also.

Fort Ancient farmers grew an eight-row variety of corn known archaeologically as Eastern 8 and historically as Northern Flint. Domesticated beans were also an important part of the Fort Ancient diet, but Fort Ancient farmers did not grow plants for their starchy-oil seeds as did their Mississippian contemporaries and Woodland ancestors. Nor did they depend on nut resources (hickory, black walnut, butternut) as heavily as the Mississippians. Other wild plant foods, such as grape, sumac, bedstraw, and pawpaw, supplemented the Fort Ancient diet.

Animal Foods

Mississippian and Fort Ancient peoples hunted the animals that were available to them in their home region. Mississippian groups depended on animals whose availability was highly seasonal. At least 50 percent of their total animal protein may have come from backwater fish species, which are primarily available in the spring and early summer, and the migratory waterfowl that passed through the region in the spring and fall. A third component of the Mississippian animal resource list was terrestrial (land) species, represented by deer, raccoon, and turkey. Other land mammals and aquatic species represent minor components of the Mississippian animal food diet.

Fort Ancient animal hunting was geared to the natural movements of deer and elk that inhabited the open woodlands and canebrakes of central Kentucky and which were attracted to the region's salt licks. Four animals were relied upon. Deer, bear, and elk provided about equal amounts of meat, with turkey providing decidedly less. Fish, birds, reptiles, and other terrestrial and semi-aquatic mammals were also eaten, but these species were only minor contributors to the Fort Ancient animal food diet.

Material Culture

Mississippian and Fort Ancient people had similar technologies and in general, made similar types of tools and ornaments. Both relied on the bow and arrow for hunting, using wooden or cane shafts tipped with stone or bone arrows. Both used and manufactured a variety of groundstone tools and implements, such as grinding stones, hammerstones, celts, pendants, and pipes. Individuals in both cultures made a variety of bone objects, including pins, awls, and beads. Shell artifacts included beads and gorgets. They also made twined fabrics (closely twisted pairs of yarns around other yarn pairs) and cordage from grasses for clothing and mats. In addition, they made baskets that were used to store and transport food, grew gourds for containers, and made items from wood.

There are some stylistic and functional differences between Mississippian and Fort Ancient technologies, however, that are worth noting. Mississippian peoples preferred to use stone hoes to work their fields. These hoes were manufactured from varieties of chert that are only found in western Tennessee and southern Illinois. The raw materials or the finished hoes were exchanged over long distances. The absence of similar hoes at Fort Ancient villages suggests that Fort Ancient peoples did not have access to these resources or chose not to use stone hoes. They did, however, use thick freshwater mussel shells or elk scapulae as hoes to work their fields. Both

groups used digging sticks to plant their crops.

The aspect of material culture that best distinguishes Mississippian and Fort Ancient technology is pottery. Potters in both cultures began using crushed burned mussel shell to temper their pots (added to the clay to guard against breakage during the firing process) around A.D. 1000, and in the centuries that followed, crushed shell became the primary tempering material, replacing limestone or fired clay temper. They also began to attach handles to jars: first loop handles, then thick strap handles, and finally thin straps.

Mississippian potters, however, made a wider variety of vessels and used more complex and varied decorative techniques than their Fort Ancient counterparts. Mississippian vessel forms included jars, bowls, plates, pans (large shallow vessels), and bottles. With the exception of pans, many of which have fabric impressions on their exterior surfaces, most vessels have plain exteriors. Jars and pans were tempered with coarser shell fragments and fired at a lower temperature than bowls, plates, and bottles. The latter were tempered with very small pieces of shell, and their exterior surfaces were well-smoothed and highly polished.

Jars were used for cooking and storing food, while pans were used, among other things, to process salt. Bowls, plates, and bottles were primarily used to serve food. Some bowls, plates and bottles were special vessels, used for certain ceremonies or placed with the dead. These were often highly decorated or molded into animal shapes such as fish or owls. Some bowls had duck, bird, or human effigy heads attached to their rims.

Prior to A.D. 1400, almost all Fort Ancient ceramic vessels were jars with smoothed or cordage-impressed exterior surfaces. Bowls and pans do not become common at Fort Ancient sites until after A.D. 1400. As with their Mississippian contemporaries, Fort Ancient people used jars for cooking and storage.

Decoration consisted of incising, slipping, and painting, with the former more prevalent on Fort Ancient pots and the latter two occurring almost exclusively on Mississippian pots. Geometric designs were incised (using an instrument like a sharpened stick or bone, a potter would draw designs in the still-wet clay) on the necks of ceramic jars. These designs often consisted of a series of line-filled triangles or other rectangular and curved motifs.

Mississippian people used a red slip (a coating of fine red clay mixed with water that was applied to the outside of a vessel before it was fired) to decorate vessels. They also used a technique known as negative painting. After a vessel had been fired, designs were painted with a waxy substance on the vessel exterior. The vessel exterior was then coated with a pigment, probably made from plants, and refired. During the second firing, the vegetal pigment charred, producing a black background, and the wax melted, uncovering the design.

Social and Political Organization

Society

Within Mississippian and Fort Ancient societies, everyone belonged to a clan (a group of people who consider themselves to be related through a single ancestor) and each clan had a totem or identifying symbol, typically an animal. People lived with their close relatives and married individuals from the other clans. Clans helped maintain rules of conduct and etiquette among kin, settle disputes, maintain rules regarding hospitality to strangers, and ensured that an individual married someone from another clan. Within Mississippian towns, there were two sets of clans, and within each set, the clans were ranked, with leaders being selected from the highest-ranked clans. Multiple clans lived within Fort Ancient villages, but each was as equal in importance as another.

Politics

Throughout the Eastern Woodlands around A.D. 1000, a greater reliance on cultivated plants for food led to a general reduction of mobility: people began to live in one place for all or most of the year. This, in turn, led to population growth, the building of larger settlements, and the need for clear leaders.

Farmers, unlike gardeners or hunter-gatherers, can produce a surplus of food. It can be stored for use at a later date, exchanged for other things (food or manufactured items), or used to support individuals not directly involved in food production. This gives farming societies a more stable and reliable food supply. However, depending on cultivated plants also carries with it environmental and social risks. Most small-scale farming societies must deal with these risks if they are to survive. These risks include poor harvests and the seasonal availability of certain foods. Factors such as plant disease and reductions in rainfall or soil fertility can lead to poor harvests and create a scarcity of food that places a society at risk.

The effects of some of these factors are easier to predict, and thus anticipate, than others. For example, in areas that are not seasonally flooded (ridgetops and uplands), farming groups can expect reduced yields the longer a field is cultivated without adding fertilizer. Likewise, crops planted in bottomlands may be devastated by a flood. The seasonal availability of cultivated crops, like corn, creates problems associated with consumption and storage for use at a later date. When the crops are harvested, food is plentiful, but some food must be stored for use during the winter, and some seeds must be saved for the spring planting.

In dealing with environmental risks, Kentucky's village farmers had to make decisions concerning when to plant, who would farm the best fields or those closest to the village, and how food would be distributed to those who did not have a good harvest. Thus, as people came to rely more on cultivated plants for food, and as villages grew in size within both Mississippian and Fort Ancient societies, a need arose for leaders who could make these decisions.

Within Fort Ancient society, clan and village leadership positions were determined on the basis

of a person's past accomplishments. These individuals led by consensus and had little direct control over the residents in their village. A leader's house could only be distinguished from those of the rest of the community by its size: it was usually the largest house and was often used as the site of important meetings. Ceremonies and festivals were organized by the village leaders, with each clan contributing foodstuffs and time to prepare for the festivities.

Mississippian society differed from Fort Ancient society in that people belonged to one of two classes: elite or commoner. Within Mississippian society, the highest ranked clan had gained sufficient power to become a ruling class or elite. The elite were distinguished from commoners by their dress, the food they ate, and where they lived in the community. They had more and fancier ornaments, ate the best cuts of meat, and lived in larger houses near the platform mounds. The elite also sponsored major festivals that promoted group solidarity and provided opportunities for people to meet to exchange goods and ideas, and to find spouses. The elite also promoted food sharing at critical times and made decisions concerning when to plant in the spring.

The leading family of the ruling clan was the "royal family." A chief's position was directly linked to his ancestors, and his sons were next in line to become chief. The social place of other elite people was directly related to their genealogical relationship to the chief.

Trade and Exchange

Both Mississippian and Fort Ancient people exchanged goods, with their neighbors and with groups outside their home territories. Local exchanges between neighbors were often of a reciprocal nature and often involved helping one another. Most of the items exchanged were the raw materials for making tools or were foodstuffs. Exchange with non-local groups often involved items that were not available within their home territory. Many of these items were considered important because of their rarity or their association with certain ceremonies.

Mississippian elites derived some of their power from the control and regulation of the exchange of items with non-local groups. These prestige goods probably included perishable materials like feathers, as well as non-perishables materials like marine shell beads and gorgets, copper earspools, and fluorite beads. Interaction with elites outside western Kentucky provided the Mississippian elites with access to information about the world that was not available to the rest of western Kentucky society. It gave them access to new symbols, which they could use to convince their followers that they were the critical mediators between the commoners and the cosmos. In this manner, they were able to maintain their positions in society and attract followers.

Prior to A.D. 1400, Fort Ancient people had a very limited participation in long-distance exchange networks. After A.D. 1400, exchange with other regions increased, indicated by the presence of catlinite (a prized stone, usually dark red) pipes from the Minnesota area and marine shell gorgets and beads at Fort Ancient village sites. Exchange within Fort Ancient society was reciprocal in nature. Fort Ancient leaders after A.D. 1400 used long distance exchange of prestige goods to bolster their positions in society, but never to the same extent as Mississippian

elites.

Western Kentucky Mississippian people may have given fluorite to other groups in exchange for nonlocal, prestige goods. After A.D. 1400, Fort Ancient people may have produced a surplus of salt to exchange with other groups. It is possible that items that are not preserved in the archaeological record, such as feathers and medicinal plants, were exchanged as well.

Health Considerations

Health considerations for Mississippian and Fort Ancient peoples are similar to those for most non-industrial societies. Their health was affected by their diet as well as by the diseases made possible by settling in one place for long periods of time and living in large groups. Their health problems differ in important ways from those of their more mobile ancestors, who lived in smaller groups and ate a more varied diet.

Although a greater reliance on corn led to an increase in village size, regional population density, and a decrease in village mobility (sedentism), it did not necessarily lead to better health. In fact, a greater reliance on corn appears to have led to an increase in tooth decay, due to a diet high in soft starchy foods. Kentucky's village farmers had a high infant mortality rate, with many children of both cultures dying before the age of two (at weaning). Life expectancy decreased relative to the life expectancies of earlier groups due to the increase in infectious diseases brought on by living in larger groups.

In general, elite and non-elites in Mississippian society had the same health problems. However, some archaeological evidence suggests that elite Mississippian males were taller than non-elite Mississippian males and that they may not have been involved in physical activities to the same degree as non-elite males. Supporting this suggestion is information that indicates Mississippian elites may have eaten the best cuts of meat and greater quantities of meat than non-elites. Elites would also have had access to a greater variety of plant foods than commoners. No such differences in stature have been identified for Fort Ancient groups, where all members would have consumed the same foods.

Many individuals of both societies were afflicted with arthritis, and others exhibit traumas that reflect the healing of fractures. These fractures may have been caused by accidents or may have been inflicted by members of other groups. Mississippian and Fort Ancient farmers alike suffered from anemia and tuberculosis or tuberculosis-like diseases. The former was the result of a diet so dependent on corn, while the latter was the result of crowded living conditions.

Summary

This examination of two different but contemporary farming societies in prehistoric Kentucky has shown how variations on the same theme can be equally viable for the people who are a part of those societies. Natural resources, cultural histories, cultural preferences in types of plants and animals used, social and political structures, the nature of outside economic links, all of these variables -- combined with cultural aspects which archaeological discovery cannot reveal, such as language, world view, religious ceremonies, and oral traditions -- contribute to the uniqueness of individual cultures.

The similarities (and differences) that students will find between these prehistoric village farming cultures and the farm families of Kentucky today will enhance their appreciation of prehistoric lifeways and the underlying humanity of all peoples.

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Classroom Activities
prepared by Kentucky educators

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.
2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

Research the ancient environment of Kentucky. Collect pictures of key physical features and land types. Collect maps of the state, including early settlers' maps and maps which have been created by scholars to denote trade routes, migration of birds, etc. Study topographical maps of the state. Combine these resources into one map which indicates key features of the state: rivers and natural lakes, caves, salt licks/springs, the Warrior's Path (later the Wilderness Road) and place the map in the center of a display of the collected pictures. Groups of students will select an area on the map as the site for their farming village and explain why the resources available in that area make it an appropriate choice. **(PE, OE, P--Middle, High)**

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.
2.20: Students recognize the continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Interview farmers in your community or invite them to speak to the class. Ask questions about the climate and land in Kentucky - Why is it suited to certain crops? What kinds of challenges to farmers does the land present? Have the farmers describe the most important characteristics and features that farm land should have. What kinds of crops are grown in Kentucky today? How do farmers work together as a community? What difficulties do farmers today have? What changes have they witnessed in their lifetimes?

In what ways are the farming cultures of prehistoric Kentucky similar to the lifeways of the farmers in the state today? How do they differ? Chart these similarities and differences. Why does studying the prehistoric farming cultures of Kentucky help develop an appreciation for all cultural diversity? **(OE, P--Middle, High)**

2.2: Students identify, compare, and contrast patterns and use patterns to understand and interpret past and present events and predict future events.
2.4: Students use models and scale to explain or predict the organization, function, and behavior of objects, materials, or living things in their environment.
2.20: Students recognize the continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Research the types of houses and villages found in Mississippian and Fort Ancient cultures. Create illustrations which compare and contrast these villages and architectural styles. Discuss types of sub-communities in Kentucky today (apartment buildings, subdivisions, cities, suburbs, towns). How do these community units compare to ancient farming communities in Kentucky? Fort Ancient and Mississippian villages were planned based on the communities' religious, social, and political needs. Where are cemeteries, churches, businesses, and government buildings placed in our own communities today?

Draw a map of a Mississippian or Fort Ancient town or village. Draw a map of your town or community. Include important buildings and places for community gatherings. Compare the two. What patterns or arrangements do you see? Why do towns today develop in certain patterns? **(PE, OE, P--Middle, High)**

2.22: Students create products and make presentations that convey concepts and feelings.
2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

View Mississippian and Fort Ancient pottery in museum collections such as Wickliffe Mounds (Wickliffe), The Filson Club (Louisville), The Museum of Anthropology, University of Kentucky (Lexington), or collect illustrations from publications. Sketch the geometric patterns and human and animal forms which decorate the pots. Why are bird forms, such as owls or eagles, so common? Discuss different vessel shapes and possible uses. Back in the classroom, create clay vessels based on these prehistoric forms, using incising techniques for geometric surface designs as well as sculptural shaping of human and animal likenesses. **(PE, OE, P--Elementary, Middle, High)**

2.20: Students recognize the continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Create a chart to compare and contrast Mississippian and Fort Ancient cultures. Include basic descriptions of the following: environment, climate; community organization; architecture; diet and health; political and social structure; religion and burial customs; material culture (tools, pottery, etc.); and trade. (Refer to the chart on the following pages as an example.) **(P--Middle)**

Compare and contrast trade in Mississippian and Fort Ancient cultures. What are some highly prized items for trade in the region during this time? What are trade items for Kentucky in the current economic scene? **(OE--Middle)**

Divide the class into small groups. Have each group prepare a newspaper from either the Fort Ancient or Mississippian culture. Be sure to include the various parts of a newspaper (current events, editorials, cartoons, advertisements, advice columns, etc.). Then, have the students exchange papers and read each others' work. **(P, PE--High)**

2.15: Students recognize varying forms of government and address issues of importance to citizens in a democracy, including authority, power, civic action, and rights and responsibilities.
2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.

Compare and contrast the political and social structure of Mississippian and Fort Ancient cultures. How were leaders selected? What was their role in society? Why did one culture have elected leaders while the other determined leadership through heredity in an elite family? Compare these political structures with modern political structures all over the world. Which ancient Kentucky culture is more like the political culture in America today? Make one list of countries where leadership roles and customs resemble Fort Ancient culture and another list where leadership roles and customs resemble Mississippian culture. **(P, PE, OE--Middle)**

Create a vocabulary from this chapter. Students should define the terms while working in groups. Include these words: hamlet, farmstead, village, burial mound, clan, totem, elite, commoner, chiefdom, tribe, prestige goods, plaza, egalitarian, class structure. Students should first define the terms as they are used to describe Fort Ancient and Mississippian cultures. Discuss the fact that these terms have been assigned by modern anthropologists. Find other ways that the same terms are used today, as applied to contemporary or other historic cultures. Is it possible to find parallel terms to describe our political and social equivalents in America today? What would they be? **(PE, OE, P--High)**

Mississippian and Fort Ancient Farming Cultures
Comparison Chart

Mississippian	Both	Fort Ancient
	temperate climate with seasonal variations; varied flora and fauna	
Jackson Purchase: floodplain; land flat, rivers slow-moving, flooding seasonal; woodlands, cane, and prairies; migration path of birds		Bluegrass: broad ridges, swift rivers; woodlands, cane; saline springs and game trails
	large permanent settlements with plazas and mounds	
farmsteads, hamlets, villages, towns; linked politically, socially, economically; platform mounds		villages politically autonomous; in village during summer, in hunting camps during winter; burial mounds
houses wooden framework covered with daub		houses wooden framework covered with bark, skins, or woven mats; built in shallow basins
	Horticulture primary - plus hunting, fishing, gathering; varied diet, corn important; risks due to seasonal availability of foods and variation in harvests	

Mississippian	Both	Fort Ancient
Midwestern 12 variety of corn		Eastern 8 (Northern Flint) variety of corn
few domesticated beans		domesticated beans and wild plants important
starchy-oily seeds and nuts important		nuts and starchy-oily seeds not as important
hunted primarily backwater fish, migratory water fowl; plus deer, raccoon, turkey		hunted primarily deer, elk, bear; some turkey, fish, birds
	clans with totems; ceremonial life important; lived with close relatives; leaders managed risks and organized ceremonies	
tall mounds for elite residences or ceremonial structures		low mounds for burial of the dead
cemetery in town; variations by class; burial goods common		cemetery within village; egalitarian; few burial goods
chiefdoms - two classes: elite and commoner; leadership hereditary; elite ate more meat and varied plants		tribes -egalitarian; leaders chosen by accomplishments, lived in largest house; diets more equal among all members of a community

Mississippian	Both	Fort Ancient
	similar material culture: cordage and twined fabrics, groundstone tools, bow & arrow, bone & shell tools and ornaments, baskets, shell-tempered pots	
chert hoes		mussel shell hoes
wider variety of ceramic vessel forms: jars, bowls, pans, bottles, plates		ceramic jars only prior to A.D. 1400; gourds, wooden bowls used; later, ceramic bowls and pans also used
fine- and coarse-shell tempered ceramic		only coarse shell-tempered ceramic
greater variety of ceramic decorative techniques; incised pottery, red slip and negative painting techniques		more incised decoration; geometric design
	similar health problems: tooth decay, arthritis, anemia, tuberculosis, high infant mortality; risks due to uncertainty & seasonality of horticulture	
	long-distance trade with other groups	
extensively traded perishable and non-perishable goods for marine shell, copper earspools, fluorite, stone hoes		trade not extensive prior to A.D. 1400; traded perishable and non-perishable goods, including salt

Chapter 4

Plant Cultivation in Ancient Kentucky

by Jack Rossen

Introduction

We must look back more than 3000 years to find true hunter-gatherers in Kentucky who relied totally on wild plant collecting and hunting. This section describes plant use, gardening and farming by Native Americans in Kentucky from about 1000 B.C. to A.D. 1750. The first cultivated plants were native species with edible seeds. Later, tropical plants like corn, beans, and tobacco arrived from Mexico (and maybe from South America) and were used differently in various sections of Kentucky. During those 3000 years, Native Americans actively changed their environment, instead of just living passively with nature. Native Kentuckians also changed greatly as new plants arrived, and different Kentucky groups grew different plants at the same time. Studying ancient gardening and farming in Kentucky is one way to recognize the complexity of Native American lifeways. It is therefore incorrect to think of prehistoric Kentuckians as simple, primitive, unchanging or all alike.

Gardening and Native Cultigens

Archaeologists used to think that before the arrival of corn and beans to ancient Kentucky, the Native Americans only gathered wild nuts, edible seeds, roots, and fruits. We now know that at least 3,000 years ago, towards the end of the Archaic Period, Native Americans began to plant gardens. In addition to collecting wild plants, people began to grow a variety of weedy plants, mostly native to Kentucky. These native cultigens included lambsquarters or chenopod (*Chenopodium* sp.), erect knotweed (*Polygonum erectum*), marshelder (*Iva annua*), sunflower (*Helianthus annuus*), maygrass (*Phalaris caroliniana*), and probably little barley (*Hordeum* sp.). Archaeologists have found these plants at several archaeological sites in eastern Kentucky, such as in the Cloudsplitter and Cold Oak Rockshelters in the Daniel Boone National Forest.

The native cultigens produce starchy or oily seeds which, although small in size, are rich in protein, vitamins, and minerals. Except for sunflower and maygrass, these plants are all common weeds today in Kentucky. If you garden, you may pull up and throw away a lot of lambsquarters growing as weeds. Perhaps they are so common today as weeds because prehistoric Kentuckians grew them for thousands of years. Of these plants, only sunflower is in common use today (although today's common sunflower is a different variety with much larger heads than the ancient type). So how do we know these plants were really grown by prehistoric gardeners? First, the seeds are often found in great numbers in archaeological sites. Second, the seeds are sometimes larger or have changed shape compared to today's wild versions, which show how they were selected and specially bred (hybridized). Third, a plant like maygrass is believed to have been

cultivated because it is naturally found in warmer climates south of Kentucky. The small seeds of these plants may have been ground into flour or eaten parched. There is also some evidence that seeds were popped much like popcorn. In addition to having edible seeds, lambsquarters has leaves like spinach that are eaten in a salad or cooked.

Native peoples grew two other plants during the Woodland Period: squash (*Cucurbita pepo*) and gourd (*Lagenaria* sp.). The ancient squashes growing in Kentucky were hard-shelled varieties, perhaps similar to the acorn and butternut squashes in the supermarket today. Gourds were used as containers before pottery, and their seeds were eaten.

The presence of these plants has sparked much debate among scientists. Were they introduced from Mexico into the southeastern U.S. or were they native species that were domesticated much like the starchy-oily seed plants? Squash was found in a very early site along the Green River in western Kentucky, dated to nearly 8000 years ago. This suggests that it was a weedy native plant, because it was present in Kentucky so much earlier than any of the native cultigens. Future research may tell us more.

The Appearance of Corn

Corn appeared for the first time in Kentucky at about 100 B.C.-A.D. 200. The first corn had small cobs only 3 or 4 inches long with eight rows of kernels (counting around the cob center). It has been found in only very small amounts, suggesting that it was grown for use in ritual or religious activities and that it was not an important component of the everyday diet.

How did corn get to Kentucky? Corn is a tropical plant that was cultivated for thousands of years in Mexico and Peru before arriving in Kentucky. Prehistoric plants moved from place to place through a process called diffusion. This probably was a form of exchange between families and groups. In this manner, plants and other objects (e.g., marine shell, copper, feathers, etc.) traveled great distances without large movements or migrations of people. This is how prehistoric Kentuckians could grow plants from Mexico without actually meeting ancient Mexicans.

The Corn and Beans Era

Towards the end of the Woodland Period, about A.D. 900, the gardening system of thousands of years remained mostly unchanged. Wild nuts and the native cultigens dominated plant use, and small amounts of corn were used. However, at about A.D. 950-1000 dramatic changes occurred. Corn rapidly became the dominating plant, along with another newly-introduced tropical cultigen, *Phaseolus* beans.

Corn was prepared in numerous ways. It was ground into flour for cornbread, parched, and popped. Green, not fully grown, ears of corn were roasted over fires, and an annual ceremony,

the "green corn dance" was celebrated when the first green corn was ready, according to historic accounts for some areas of the southeast U.S. A form of hominy was made by boiling and grinding the hulled corn. A creamed corn was also made by boiling hulled corn over a low fire for ten to twelve hours.

Beans were boiled, stewed or parched. One common type of cooking was known as "hot rock" cooking. A hot rock from the fire was placed in a pot with water, and a variety of plant and animal foods were placed in the pot. Food was also cooked over fires in dugout rock or clay-lined "earth ovens".

Gardening and Farming

The great change to the corn and beans era was really a change from gardening to farming. What are the differences between the earlier gardening and later farming in ancient Kentucky? Gardeners worked small plots with a variety of plants. Each garden was probably worked by a single family, and garden products were only a minor part (perhaps 10 to 20%) of the diet . In contrast, farmers worked larger plots and concentrated on fewer plants. The plants eventually made up 70-80% of the diet. Archaeologists think that kin-related households worked together to clear fields, plant them, hoe, and harvest crops. This work was primarily done by women. Several plants were grown together. For example, beans were planted to climb the corn stalks. Despite this, a farm plot was abandoned after a few years to grow back to brush (and eventually, forest) as the soil was exhausted. New farm plots were cleared. Similar forms of rotating or shifting agriculture are still practiced among gardening and farming groups in the Amazon rain forest, and parts of Asia and Africa.

During Kentucky's Late Prehistoric Period (A.D. 1000-1750), at least two distinct cultural groups, the Mississippian peoples in western Kentucky and the Fort Ancient peoples in central and eastern Kentucky, were village farmers. These groups were different in their social class distinctions, village organization, and material items such as pottery (further described in Chapter 3 of this packet).

Even though the Mississippian and Fort Ancient people were both farmers, there were important differences in their agriculture. Each grew a different type of corn. Mississippian corn in western Kentucky had 12 rows of kernels around the cob (a variety called "Midwestern 12" by archaeologists). In central and eastern Kentucky, Fort Ancient corn had eight rows (called the "Eastern 8" variety). The two corn types might have arrived in Kentucky from different areas, or might represent different selection or hybridization.

Besides corn varieties, there were other notable farming differences between Mississippian and Fort Ancient peoples. Mississippians maintained and even increased use of the native cultigens. Notable size increases in the seeds of some of these plants (like marshelder and sunflower) suggest that new hybridization efforts were made on them. Nut use, particularly of hickory, also increased. Archaeobotanists think this may mean that native peoples actively managed trees to

increase production (a practice called silviculture).

In contrast, Fort Ancient groups of the Ohio Valley almost completely stopped using all native cultigens, with the single exception of lambsquarters (chenopod). Fort Ancient peoples also sharply decreased their collection of nuts. However, they continued to collect wild fruits such as grape, pawpaw, and blackberry. Sumac bushes, whose berries were eaten and used to make a Vitamin C-rich tea, were also possibly cultivated.

The arrival of *Phaseolus* beans from Mexico or South America at A.D. 1000 was very important. Corn and beans have different amino acids, the building blocks of protein, and together they form complete proteins. This combination can substitute for meat protein in the diet. Prehistoric beans were much like modern pinto and navy beans. Unlike corn, which appeared in small amounts for 800-1000 years before becoming important to the diet, beans were immediately used in great numbers by the Fort Ancient people. However, beans are almost never found in western Kentucky Mississippian sites and were probably not used much in that part of the state.

Throughout Kentucky at this time, native peoples grew a variety of tobacco. Although we don't know much about the history of its use in Kentucky, we know that it originated in South America and gradually diffused to Kentucky over thousands of years. Early tobacco (*Nicotiana rustica*) is quite different than our modern varieties, primarily because the ancient tobacco had a much higher nicotine content. It was probably used during special occasions, such as during trading visits to reaffirm social ties, and by specialists in curing and religious rituals, and not as a common everyday smoke.

Accepting or Rejecting New Plants

When tropical cultigens like corn, beans, and tobacco were introduced and accepted by a culture, they had to be fit into the system, or be "reinterpreted". This means that corn in Kentucky had different cultural and religious meanings, and that it was prepared and eaten differently than in Mexico. These plants were thus not foreign, but, in many ways, became native in their new region.

The differences between the agricultural systems of major Kentucky Late Prehistoric peoples are important. The Mississippian-Fort Ancient plant differences may be partly due to environmental differences, such as the broader floodplains of western Kentucky. Decisions were made by both Mississippian and Fort Ancient groups to abandon time-proven food resources, to accept or reject new plants, or to try new hybridizations on old plants. Some of these decisions may be difficult for us to understand. Why would the Fort Ancient people abandon nuts and most native cultigens? Why would Mississippian groups reject the bounty of *Phaseolus* beans, which they surely knew about?

Archaeologists are still researching these questions. Some plants may have grown better in the

different soils and climates found in different parts of Kentucky. Some plants we use and our food preferences are connected to our group or ethnic identity (in other words, they are traditions). Some groups of people are more open to change. They look outward for new items such as plants, eager to try new things. Other groups are isolated and inward-looking. They prefer to work with materials or plants that they already have. Differences in attitude toward outside or foreign items might help explain ancient peoples who chose to use or ignore new plants.

The Science of Archaeobotany

Information on prehistoric plant use by Native Americans is studied by specialists within archaeology called archaeobotanists (or sometimes, paleoethnobotanists). Professional archaeologists take soil samples from fire hearths, trash pits, and storage pits during a dig. The soil samples are placed in a water flotation tank, where agitated water separates the soil and causes even tiny pieces of charcoal to float to the top, where they are collected in nylon bags. Basically, the flotation tank removes the soil, leaving everything else behind. The sample is then dried, sorted to remove roots and twigs, and examined under a microscope at low magnifications of between 8 and 30x. Charred (carbonized) seeds and other specimens are compared to known seeds to identify them. Even wood charcoal fragments can be identified to find out what types of wood were being used for house building and firewood, and, generally, what kinds of trees were in the prehistoric forests of Kentucky.

Water flotation was first tried on archaeological sites in 1968, so scientific archaeobotany is fairly new to archaeology. In Kentucky, most of our detailed information about prehistoric gardening and farming has been collected in the last 12 years. The advances in our knowledge are remarkable considering how recently the studies began. Of course, there are limits to this type of research. Only a small percentage of the plants used by Native Kentuckians, including the most important plants, may be found in most archaeological sites.

Summary: The Plant Perspective

The study of plant remains offers a special perspective on the past. Plants are different than pots and stone tools because they represent living species. Each plant has its own history, and plants are often changed by people to meet their needs. Some plants grown in ancient times were developed here in Kentucky, while others arrived from outside areas (like Mexico and the Southwestern U.S.).

In Kentucky prehistory, different groups grew very different kinds of plants. Native groups made decisions about the plants they grew and ate. New plants had to fit the social, religious, and economic needs of the group to be accepted, or to continue to be used. As a result, there were many changes in the plant foods eaten and emphasized during Kentucky's prehistory. At any one time, different plants were grown and used in different parts of Kentucky. The study of ancient

plant use shows us some of the complexities of prehistoric life in Kentucky.

Classroom Activities
prepared by Kentucky educators

2.1: Students use appropriate and relevant scientific skills to solve specific problems in real-life situations.

Define and discuss the science of archaeobotany. When we visit museums we may see many examples of pottery and stone tools from archaeological sites in Kentucky. These are important tools in studying lifeways of people who once lived here. Specialists in archaeology called archaeobotanists are now studying prehistoric plants and plant cultivation by Native Americans. Why is it important to study plants, cultivation, gardening, farming, and plant use by Kentucky's native peoples? What can this tell us about the lifeways of these people? Why is this information important? Be sure to think about natural resources and their value. **(OE--Elementary, Middle)**

1.10: Students organize information through development and use of classification rules and classification systems.

Create a "web," labeling the center Archaic Period Plants, then do the same for Woodland Period Plants and Late Woodland-Late Prehistoric Period Plants. Create a web with the center labeled Major Crops in Kentucky Today. **(P, PE--Middle, High)**

2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them. 2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Discuss farming in ancient Kentucky. Review the facts: farms were worked by communities and resources shared (vs. family plot gardens); just a few types of plants were grown; these plants grown were very important to the diet of the people; women did most of the farming work; different plants were grown in the same field; after soil was used for a while, it was abandoned and new fields cleared; major crops were corn and beans, other crops included tobacco, squash, gourds. Interview farmers in Kentucky today to learn about farming methods, crops, labor, etc. Write a piece for your writing portfolio that compares ancient farming in Kentucky to modern farming in Kentucky. **(P, PE--Middle, High)**

1.3: Students construct meaning from messages communicated in a variety of ways for a variety of purposes through observing.

Discuss how native people in Kentucky collected wild plants and grew many weedy native plants. Collect pictures of the native cultigens listed in the "Gardening and Native Cultigens" section of this chapter. Does anyone recognize any of these plants as weeds from their yards at home? With parents help, look for these plants at home and mount specimens on boards, labeling them. **(P, PE-- Elementary)**

2.1: Students use appropriate and relevant scientific skills to solve specific problems in real-life situations.

Pretend you are an archaeobotanist of the future, studying the garbage created in the 1990s. What would you find? What kind of foods were eaten? How were they prepared? What does this say about the culture who left these clues behind? In order to make this discussion more complete, you may want to pretend that a great deal of waste materials will be preserved, such as food packaging and containers, as well as remnants of foods themselves. What do freezer and microwave foods tell you about life in the 1990s? What do you gain when you think about the nutritional information provided on packaging labels? Do the foods you have found reflect a true interest in nutrition? What do you learn about the technology of this time? How do you interpret the ethnic food products in this American land fill? List some menus of the 1990s. How do they help us interpret life at this time? **(PE, OE, P--Middle)**

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Think about the importance of food to cultural traditions. Share some foods that are a part of your family traditions. Why are these foods special? Have a tasting day of traditional foods. Have your family food traditions changed over time? Why? What American celebrations have specific foods associated with them?

Students could write and share pieces about food traditions in their family. A recipe book of traditional family recipes could be compiled, accompanied by some of these written pieces. **(OE, PE, P-- Elementary, Middle)**

2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Create a food chart picturing important plants from native North and South American cultures. Collect images from magazines which depict these plants as food sources (think of native plants which are ingredients in many foods, too, such as cocoa and vanilla) and create a collage with them. How many food products can you think of which come from native plants? How many of your favorite foods were first grown by Native Americans? (Your lists should include: corn, beans, potatoes, peanuts, pumpkin, tomatoes, squash, peppers.)
(OE, PE, P-- Elementary, Middle)

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Cultural and geographical differences in diet and plant cultivation existed in the Late Prehistoric Period in Kentucky. Create a chart which compares Mississippian and Fort Ancient peoples. Using information from Chapter 3 of this packet, can you identify non-dietary cultural differences which may have been directly or indirectly the result of differences in diet and plant cultivation?

Select one or two countries on several continents. Research the main foods now grown there and the main foods consumed. Are the main crops grown always the same as the main foods consumed? Create a world map illustrating your findings. **(OE, PE, P-- Middle)**

2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

As a class, make a list of foods and products which come from corn. Discuss the many ways that Native Americans used corn (corn meal, corn bread, corn pancakes, popcorn, parched corn, succotash, corn in stews, corn starch...). Create a collage of pictures of corn foods and corn products. Have each student bring a copy of a corn or corn product recipe from home. Create a class book of corn recipes and include illustrations made by the students.
(OE, PE, P-- Elementary)

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
2.31: Students demonstrate skills and self-responsibility in understanding, achieving, and maintaining physical wellness.

Research the effects of diet on the health of Native American farming cultures in this region. What health problems were common (arthritis, anemia, tuberculosis, high infant mortality, tooth decay...)? Are there correlations between some of these health problems and diet? Investigate the common health problems in modern cultures. How does diet contribute to these problems? Are more health problems found in cultures which depend on a limited variety of food sources? Develop a public awareness campaign to inform a culture of the relationship between diet and health. **(PE, OE, P--High)**

Chapter 5

Oral History and Storytelling

by Stephanie Darst

Introduction

Oral history and storytelling are important and vital elements of Native American culture. Oral histories record events, often in the form of myths and legends. As such, they are a form of historical narrative. In the absence of written language, thousands of years of human activity and tribal history are preserved and passed from generation to generation by means of oral communication. These oral traditions are essential components of all cultures.

Oral traditions are significant for many reasons:

* They are history, recording the events of past generations.
  Community elders and tradition bearers are responsible for learning the history of the people and the community and teaching it to others.
  Individuals tell of their accomplishments and experiences, tellings which are remembered and continued as parts of family, clan, or tribal history.
  Society members teach others about the establishment and maintenance of cultural norms.

* They help to explain the world around us.
  Mythology, a form of oral history, provides means to explain the wonders and mysteries of the natural world. It explains the power of lightning or the reasons why animals have unique characteristics, using language and imagery accessible to all people of a group or culture. Growing from this mythology--the questioning of the surrounding forces of the earth--are answers to the biggest questions, such as those which explain Creation. They are, thus, the basis for spiritual beliefs and religion.

* They are an important means of instruction in Native American and other societies. This instruction may have a moral, practical, or spiritual message.

* Some stories and songs exist primarily as entertainment, being much stronger in humor and theatrics than in moral or spiritual content.

* They are vital means of ensuring cultural continuity. Just as hunting techniques, herbal remedies, and weaving patterns are passed from generation to generation, so too are historical accounts.

* Spoken traditions were essential means by which cultural identity was maintained by Native Americans for thousands of years prior to contact with Euro-Americans. Elements of material culture may have been destroyed, lost, or left behind as Indians came into contact with Euro-American settlers and as groups were forcibly removed from their ancestral lands. Oral traditions, preserved in the memories of the people, allowed many Native Americans to maintain their cultural identities.

Oral traditions reflect the same diversity as other aspects of culture and are influenced by the same kind of factors (contact with other Indian groups, environment, significant events, contact with non-Indians). Similar types of traditions may be found among otherwise dissimilar groups. For example, many groups possess great flood stories among their traditions, and most groups assign human characteristics to animals or other non-human forms.

Styles of storytelling vary from group to group, just as styles of other forms of expression vary. One important thing to remember, however, is that the Native American stories and legends which are popularly published today do not record the stories as they were originally told. Obviously, much was altered when the traditions were removed from their native language, but modern adaptations also reflect alterations in style and rhythm as well. Native American oral traditions have been adapted to the European style of storytelling, and while the essence of the stories is usually maintained, it is important to remember that the stories sound and feel very differently than they originally sounded and felt to their Native American audiences.

Applications for the Classroom

Storytelling is a wonderful pathway toward understanding Native American world views, beliefs, and lifeways. While some stories are obviously intended for adults and others for children, older students will find interesting material for discussion in all stories. Older students also will benefit from comparing stories from different regions, especially those that reflect how various cultures deal with their own unique physical environments, as well as problems, issues, or events common to groups everywhere. This adds a meaningful and accessible dimension to approaching the subject of cultural diversity, for oral histories and stories are forms of literature, generally more accessible than many other historic forms of world literature. The subjects of the stories show the concerns and questions of particular cultures. There are countless ways to compare Native American mythology and legends to those of other cultures as well.

It is important to evaluate these stories with a basic knowledge of the cultures they represent - the unique perspectives and worldviews of the people -

rather than judge them by our own cultural standards. What appears strange to one culture, may be perfectly normal to another.

Develop activities which show that the significance of these stories often occurs on many levels; that is, upon closer examination, they may reveal deeper, more complex sets of meanings. For example, one story may explain "why an animal has spots" on its most direct level of meaning, yet it may comment on human relationships on another level.

Younger students will particularly relate to the stories which explain nature, for these stories grow from the questioning of everything around us, a characteristic particularly keen when we are young. Most of the stories included herein will be well-suited to a younger audience, for they are short, and their ideas can be effectively discussed in an open-ended-question format. One of the best ways to involve students in the process is to have them perform parts in the story as it is told. Assign students to play characters, using basic props to assist with the imagination process if you wish.

Resources

Many of the best resources for Native American mythology and oral traditions are anthologies, often collections of stories from particular regions or cultures. Look for assurance that the editors, who may have adapted these stories for their audience, relied on good original information. Often these books will list their sources. The origin of many of these stories is sometimes traced back to the individuals who systematically recorded oral traditions in the late nineteenth and early twentieth centuries. Still others come from contemporary tradition bearers within modern Native American communities.

The field of juvenile literature holds its own set of problems. Evaluating resources in this area is difficult, for many books written for children are not based on American Indian oral traditions but rather reflect Euro-centric views. Some of these interpretations of traditional culture are excellent resources for children since they present ideas in an understandable way. But others may reinforce stereotypes or convey incorrect information. Ask questions as you look through these sources: Do they accurately present the material culture of the group or the area they describe? Do they show the humanity of native culture or is it presented as curious, or violent, or bizarre? Are biographies for children fact-based and presented from the Native American point of view?

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Story 1: The Creation
Tribe: Iroquois

Before this world came to be,
there lived in the Sky-World
an ancient chief.
In the center of this land
grew a beautiful tree
which had four white roots
stretching to each
of the four directions:
North, South, East and West.
From that beautiful tree,
all good things grew.

Then it came to be
that the beautiful tree
was uprooted and through the
hole it made in the Sky-World
fell the youthful wife
of the ancient chief,
a handful of seeds,
which she grabbed from the tree
as she fell, clutched in her hand.

Far below there were only water
and water creatures
who looked up as they swam.

"Someone comes," said the duck.
"We must make room for her."

"But there must be earth
where she can stand," said the duck
and so he dove beneath the waters,
but he could not reach the bottom.

"I shall bring up earth,"
the loon then said and he dove too,
but could not reach the bottom.

"I shall try," said the beaver
and he too dove but
could not reach the bottom.

Finally the muskrat tried.
He dove as deeply as he could,
swimming until his lungs almost burst.
With one paw he touched the bottom,
and came up with a tiny speck
of earth clutched in his paw.

"Place the earth on my back,"
the great turtle said,
and as they spread
the tiny speck of earth it grew
larger and larger and larger
until it became the whole world.

The two swans flew up
and between their wings
they caught the woman
who fell from the sky.
They brought her gently
down to the earth
where she dropped her handful
of seeds from the Sky-World.

Then it was that the first plants grew
and life on this new earth began.

From: Iroquois Stories: Heroes and Heroines Monsters and Magic, ed. by Joseph Bruchac (Trumansburg, NY: The Crossing Press, 1985).

The Iroquois are Woodlands peoples of the Northeast. They speak the Iroquoian language. In the 16th century, the Iroquois formed the League of the Five Nations, later the Iroquois Confederacy. Some believe that this successful political unity was used as a model for democratic government by the Founding Fathers of the United States. Farmers and hunters, the Iroquois traded furs in contact times and lived in large multi-family longhouses. Today, the Iroquois live in their ancestral lands of New York state and Canada.

Classroom Activities for Story 1

2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change. 2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations. 2.22: Students create products and make presentations that convey concepts and feelings. 4.5: Students demonstrate an understanding of, appreciation for, and sensitivity to a multicultural and world view.

Collect, tell, and discuss stories of creation from various cultures. Create a chart which identifies parallel or similar elements in each. Place descriptions, characters, events, and key ideas from this Iroquois story in one column (the place of the Sky-World; the characters of the chief, the woman, the muskrat, the turtle; the earth covered with water and inhabited by water creatures only; etc.). In subsequent columns, list like elements from other Creation stories. **(PE, OE, P--Middle)**

Students may create their own Creation story. It may be written, performed or told to the class. **(P, PE--Middle)**

Story 2: How Beaver Stole Fire from the Pines
Tribe: Nez Perce

Once, before there were any people in the world, the different animals and trees lived and moved about and talked together just like human beings. The pine trees had the secret of fire and guarded it jealously, so that no matter how cold it was, they alone could warm themselves. At length an unusually cold winter came, and all the animals were in danger of freezing to death. But all their attempts to discover the pines' secret were in vain, until Beaver at last hit upon a plan.

At a certain place on the Grande Ronde River in Idaho, the pines were about to hold a great council. They had built a large fire to warm themselves after bathing in the icy water, and sentinels were posted to prevent intruders from stealing their fire secret. But Beaver had hidden under the bank near the fire before the sentries had taken their places, and when a live coal rolled down the bank, he seized it, hid it in his breast, and ran away as fast as he could.

The pines immediately raised a hue and cry and started after him. Whenever he was hard pressed, Beaver darted from side to side to dodge his pursuers, and when he had a good start, he kept a straight course. The Grande Ronde River preserves the direction Beaver took in his flight, and this is why it is tortuous in some parts of its course and straight in others.

After running for a long time, the pines grew tired. So most of them halted in a body on the river banks, where they remain in great numbers to this day, forming a growth so dense that hunters can hardly get through. A few pines kept chasing Beaver, but they finally gave out one after another, and they remain scattered at intervals along the banks of the river in the places where they stopped.

There was one cedar running in the forefront of the pines, and although he despaired of capturing Beaver, he said to the few trees who were still in the chase, "We can't catch him, but I'll go to the top of the hill yonder and see how far ahead he is." So he ran to the top of the hill and saw Beaver just diving into Big Snake River where the Grande Ronde enters it. Further pursuit was out of the question. The cedar stood and watched Beaver dart across Big Snake River and give fire to some willows on the opposite bank, and recross farther on and give fire to the birches, and so on to several other kinds of trees. Since then, all who have wanted fire have got it from these particular trees, because they have fire in them and give it up readily when their wood is rubbed together in the ancient way.

Cedar still stands alone on the top of the hill where he stopped, near the junction of Grande Ronde and Big Snake rivers. He is very old, so old that his top is dead, but he still stands as a testament to the story's truth. That the chase was a very long one is shown by the fact that there are no cedars within a hundred miles upstream from him. The old people point him out to the children as they pass by. "See," they say, "here is old Cedar standing in the very spot where he stopped chasing Beaver."

From American Indian Myths and Legends, Richard Erdoes and Alfonso Ortiz, eds. (New York: Pantheon, 1984).

The Nez Perce received this name from French fur traders. Inhabitants of the northwest Plateau region (portions of Washington, Idaho, and Oregon), they were traditionally semi-nomadic hunter-gatherers. They did not rely much on agriculture. In warm weather, their temporary wood-framed houses could be easily moved; in winter, they lived in earth-covered pit houses. After the introduction of the horse, they began to enter the Plains as well. The Nez Perce

assisted the Lewis and Clark expedition. Today they live on reservations in Washington and Idaho.

Classroom Activities for Story 2

2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations. 2.22: Students create products and make presentations that convey concepts and feelings.

Discuss the human characteristics which are given to the trees in this Nez Perce story. Consider stories from other cultures in which plants or animals behave as human beings and compare them with this story. Write your own story giving human characteristics to plants or animals. **(OE, P--Elementary, Middle)**

1.7: Students organize information and communicate ideas by visualizing space configurations and movements. 2.22: Students create products and make presentations that convey concepts and feelings.

Discuss how the story explains the occurrence of certain physical features in the territory of the Nez Perce (the pines along the river banks, etc.), then create drawings illustrating the events in the story which caused these physical features. Create an aerial landscape drawing showing the physical features of the entire area described in the story. **(OE, P--Middle)**

Choreograph and perform a ballet or play to accompany the reading of this story. Have students represent the Beaver, the pine trees, the cedar, etc. **(PE--Elementary, Middle)**

Visit an outdoors site with distinctive physical features. Create a story imaginatively explaining how these features were created, giving characterizations and human actions to the key elements of the landscape. Document the site with photographs and make a tape recording of the story. **(PE, P--Middle)**

Story 3: Why the Owl Has Big Eyes
Tribe: Iroquois

Raweno, the Everything-Maker, was busy creating various animals. He was working on Rabbit, and Rabbit was saying, "I want nice long legs and long ears like a deer, and sharp fangs and claws like a panther."

"I do them up the way they want to be; I give them what they ask for," said Raweno. He was working on rabbits hind legs, making them long, the way Rabbit had ordered.

Owl, still unformed, was sitting on a tree nearby and waiting his turn. He was saying, "Whoo, whoo, I want a nice long neck like Swan's, and beautiful red feathers like Cardinal's, and a nice long beak like Egret's, and a nice crown of plumes like Heron's. I want you to make me into the most beautiful, the fastest, the most wonderful of all the birds."

Raweno said: "Be quiet. Turn around and look in the other direction. Even better, close your eyes. Don't you know that no one is allowed to watch me work?" Raweno was just then making Rabbit's ears very long, the way Rabbit wanted them.

Owl refused to do what Raweno said. "Whoo, whoo," he replied, "nobody can forbid me to watch. Nobody can order me to close my eyes. I like watching you, and watch I will."

Then Raweno became angry. He grabbed Owl, pulling him down from his branch, stuffing his head deep into his body, shaking him until his eyes grew big with fright, pulling at his ears until they were sticking up at both sides of his head.

"There," said Raweno, "that'll teach you. Now you won't be able to crane your neck to watch things you shouldn't watch. Now you have big ears to listen when someone tells you what not to do. Now you have big eyes - but not so big that you can watch me, because you'll be awake only at night , and I work by day. And your feathers won't be red like cardinal's, but gray like this" - and Raweno rubbed Owl all over with mud - "as punishment for your disobedience." So Owl flew off, pouting, "Whoo, whoo, whoo."

Then Raweno turned back to finish Rabbit, but Rabbit had been so terrified of Raweno's anger, even though it was not directed at him, that he ran off half done. As a consequence, only Rabbit's hind legs are long, and he has to hop about instead of walking and running. Also, because he took fright then, Rabbit has remained afraid of almost everything, and he never got the claws and fangs he

asked for in order to defend himself. Had he not run away then, Rabbit would have been an altogether different animal.

As for Owl, he remained as Raweno had shaped him in anger - with big eyes, a short neck, and ears sticking up on the sides of his head. On top of everything, he has to sleep during the day and come out only at night.

From American Indian Myths and Legends, Richard Erdoes and Alfonso Ortiz, eds. (New York: Pantheon, 1984).

Classroom Activities for Story 3

2.21: Students observe, analyze, and interpret human behaviors to acquire a better knowledge of self, others, and human relationships.

Select familiar stories which have moral messages or which teach important lessons. Discuss why these lessons take the form of entertaining stories. What lessons does this Iroquois story of the owl teach? **(OE--Elementary, Middle)**

2.22: Students create products and make presentations that convey concepts and feelings.

Create imaginative stories describing how certain animals gained their physical characteristics, using stories such as this one as a model. Students may want to independently create stories about the same animal and compare their creative work with that of their classmates. **(PE, P, OE--Elementary, Middle)**

Story 4: The Buffalo Go
Tribe: Kiowa

Everything the Kiowas had came from the buffalo. Their tipis were made of buffalo hides; so were their clothes and moccasins. They ate buffalo meat. Their containers were made of hide, bladders, or stomachs. The buffalo were the life of the Kiowas. Most of all, the buffalo was part of the Kiowa religion. A white buffalo calf must be sacrificed in the sun dance. The priests used parts of the buffalo to make their prayers when they healed people or when they sang to the powers above.

So when the white men wanted to build railroads, or when they wanted to farm and raise cattle, the buffalo still protected the Kiowas. They tore up the railroad tracks and the gardens. They chased the cattle off the ranges. The buffalo loved their people as much as the Kiowas loved them.

There was war between the buffalo and the white men. The white men built forts in the Kiowa country, and the woolly-headed buffalo soldiers [The Tenth Cavalry, made up of African-American troops] shot the buffalo as fast as they could, but the buffalo kept coming on, coming on, even into the post cemetery at Fort Sill. Soldiers were not enough to hold them back.

Then the white men hired hunters to do nothing but kill the buffalo. Up and down the plains those men ranged, shooting sometimes as many a hundred buffalo a day. Behind them came the skinners with their wagons. They piled the hides and bones into the wagons until they were full, and then took their loads to the new railroad stations that were being built, to be shipped east to the market. Sometimes there would be a pile of bones a high as a man, stretching a mile along the railroad track.

The buffalo saw that their day was over. They could protect their people no longer. Sadly, the last remnant of the great herd gathered in council, and decided what they would do.

The Kiowas were camped on the north side of Mount Scott, those of them who were still free to camp. One young woman got up very early in the morning. The dawn mist was still rising from Medicine Creek, and as she looked across the water, peering through the haze, she saw the last buffalo herd appear like a spirit dream.

Straight to Mount Scott the leader of the herd walked. Behind him came the cows and their calves, and the few young males who had survived. As the woman watched, the face of the mountain opened.

Inside Mount Scott the world was green and fresh, as it had been when she was a small girl. The rivers ran clear, not red. The wild plums were in blossom, chasing the redbuds up the inside slopes. Into this world of beauty the buffalo walked, never to be seen again.

From American Indian Myths and Legends, Richard Erdoes and Alfonso Ortiz, eds. (New York: Pantheon, 1984)

The Kiowa became buffalo hunters on the Great Plains after their migration from the north in the early 1700s. Their language is Kiowa. On the Plains, the Kiowa depended on the horse, following the buffalo and living in tipis. They have a long tradition of recording tribal history with pictographic images. Today a few Kiowa live on a reservation in Oklahoma, but most live in cities.

Classroom Activities for Story 4

This story describes the most important resource to the nomadic peoples of the Plains, the buffalo. It also describes the tremendous impact that the decimation of the buffalo had on the peoples and their cultures. Stories such as this one can begin a unit which analyzes the relationship between natural resources and culture, as well as the cultural changes which take place as a result of contact with other cultural groups.

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.
2.30: Students demonstrate effective decision-making and evaluative consumer skills.
3.4: Students demonstrate the ability to be resourceful and creative.

Using a photograph of the buffalo, compile a list of its parts and research the ways people of the Plains used each of these parts (meat=fresh and dried food; hides=clothing, tipi covers, etc.; hair=insulation; sinew=thread, bow strings; stomach=water bucket; brains=tanning agent; bones=tools; manure=fuel; etc.). Discuss how this complete use of the buffalo relates to ecology. Provide examples of ways we, in modern culture, wisely use our natural resources. Research other ways that Native Americans through history showed respect for and conserved natural resources. What can we learn from these environmental traditions?

With the ecological example of the buffalo in mind, create an inventive trash project. Students will develop creative uses for the throw-away "parts" of items of daily use. Choose one item for the entire class to work with (empty milk cartons...) or let students choose items on their own. Can you think of any products which are already used with minimal or no waste in our culture today? **(P, PE, OE--Middle)**

2.17: Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world.
2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.
2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

List the natural resources abundant in various cultural regions of North America and discuss how native groups in those areas utilized them. **(P, OE--Elementary, Middle)**

Research ways Euro-American contact impacted Native American culture and lifeways. Discuss the effects of the introduction of horses, guns, liquor, written language, new religions, new economic and political structures, and new diseases on native peoples and their cultures. **(PE, OE--Middle, High)**

Classroom Activities for Oral History & Storytelling

1.4: Students construct meaning from messages communicated in a variety of ways for a variety of purposes through listening.
2.17: Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world.
2.22: Students create products and make presentations that convey concepts and feelings.
2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

What is oral history? Why is it important? Tell several Native American stories. What do they reveal about their culture? How do stories from different Indian nations differ from one another? What are some comparable stories from European or American culture? After researching oral traditions of Native American nations, produce a video of a storytelling performance using appropriate performance techniques. Afterward, write a reflective piece showing how this particular oral history affected the culture of the Indian nation. **(OE, PE, P--High)**

Collect interviews with older family members. Tape the stories about your family many generations ago. Where did they live, what did they do, what challenges did they face?

Interview older members of your community to record the history of your town. When was it established? What important events shaped the history of the community?

Collect interviews with Native Americans in your community. Tape their family and tribal stories. Compare the tapes and discuss ways that the collected stories are similar or different. Discuss how stories can be ways to preserve cultural identity and history. Why is this so important? **(P, PE, OE--Middle, High)**

Research the pictographic traditions of the Kiowa and other tribes. Compare painted buffalo hides, tipi covers, wampum belts, ledger drawings, and other Native American artworks which record historical events. Create a pictographic history of your family using simple, abstracted forms. Present these artworks to the class, using the images to help tell the story of your family.

Create a pictographic mural telling a story or a history which is significant to the entire class. Work together to determine universally-accepted images so that these images serve to remind all class members of the story.
(PE, P--Elementary, Middle)

Each student will choose a traditional Native American story that explains the creation or the nature of something in the environment. Through research, they will find one story from another culture that compares to the Native American story. Then the student will create a story of their own explaining the origin of a technology in today's world (i.e., the computer, the CD-ROM, the airplane).
(PE, P--High)

Read a Native American story to the class. Students will create a "web" showing characters, theme, descriptive adjectives (the who, what, when, where, and why for the story). Post the webs in the classroom for compare and contrast discussions. These webs may also be used by the students to "retell" the story in their own words. **(PE, P--Elementary)**

Read a Native American story to the class. Students will prepare a portfolio piece in response to the story they have heard. The writing piece may take the form of a story, a poem, or a "this story makes me feel..."/"this story means..." narrative. Students will then read their piece to the class. **(P, PE--Elementary, Middle)**

Write the title of a Native American story on the chalkboard. Explain to the students they will be reading or hearing this story soon. Ask them to write their own story with the same title first. After the students have completed their own stories, read the Native American story. Conduct a discussion comparing and contrasting the stories with the same title. **(P, PE, OE-- Elementary)**

Create a "movie" of a Native American story read in class by drawing illustrations of each part of the story, in sequence, on long strips of paper. Roll the paper around a broomstick so that it may be unrolled as the story is read aloud. **(PE, P--Elementary)**

Promote cultural understanding through organizations in your school or community. Have students attend organization meetings and make presentations about the importance or oral traditions and how they help us to understand other cultures. Tell a Native American story to the group during the presentation. Organize an event to promote the understanding of other cultures, using oral traditions as one aspect of the program. **(PE--High)**

1.1: Students use research tools to locate sources of information and ideas relevant to a specific need or problem.
1.2: Students construct meaning from a variety of print materials for a variety of purposes through reading.
2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.
2.23: Students analyze their own and others' artistic products and performances.
4.5: Students demonstrate an understanding of, appreciation for, and sensitivity to a multicultural and world view.

Discuss the effects of Native American stereotypes, focusing on their presence in literature. Ask students to research Native American stereotypes and share articles or books about the effects of stereotypes with the class. After this research, assign each student to prepare a bibliography of Native American fiction for elementary or middle school children. While preparing this bibliography, the students will read many choices available in the library or bookstore and write a short critique of each book read. The critique should look for stereotypic ideas, language, or images. Is the image of Native Americans presented in the book positive? Are the details about the culture authentic/factual? Is the author Native American? Are more recent publications generally better? The final bibliography should list only those books

recommended by the student as appropriate/positive. The final step of this project will involve comparing bibliographies and working to produce a single bibliography as a class. Share this reading list with elementary or middle school classes in your community. **(OE, PE, P--High)**

Chapter 6

The Native Languages of North America

by Jim Rementer

There was a time in America when the skies would darken as the huge flocks of passenger pigeons flew over. Now they are all gone. The flashes of green and yellow from the flocks of Carolina parakeets circling above the trees have also disappeared from this land. So too have the sounds of the languages of the Yahi, the Biloxi, the Ofo, the Miami, the Piskataway, the Powhatan, and many other tribes. No speakers are left.

In many American Indian[1] tribes there are now only a handful of elderly speakers, and when the Creator calls them home, their languages, too, will disappear.

Prehistory of Native American Languages

Most scholars are of the opinion that the Native peoples of the Americas had their roots in Asia many thousands of years ago. Physical anthropology does show a number of similar physical characteristics between Native Americans[1] and some Asians: the same type of hair, shovel-shaped incisor teeth, sparse body and facial hair, and dark eyes. Archaeological evidence keeps pushing back the length of time the ancestors of today's Native Americans have been here. From a linguistic viewpoint, attempts to connect Native American languages with those of Asia have been unsuccessful. In fact, some Native Americans feel that their ancestors have always been here.

Diversity of the Languages

At one time there were over 500 American Indian languages spoken in North America. As of 1975, the number of languages still spoken was about 180. The number at the present day is probably much lower.

There are about eighteen different language families in North America. Some linguists have attempted to group these into just a few extended families, but the results are inconclusive. It may well be that they did not have a common ancestor. Probably separate migrations at different times introduced linguistic variety from the very beginning. The language families may be as independent in ancestry as Spanish and Japanese. As in a human family, all the languages in one family share a common ancestor. Each family could number from a single language to twenty-five or more languages.

Many of the languages used in North America are classed as "morphologically complex" or "polysynthetic." This is just a complex way of saying that the words are often composed of a number of morphemes (units of meaning) which have been put together into one word. An

English example of this would be the word "cats" which is made up of two morphemes. The first is "cat," and the second is "-s" which tells the reader that this word is a plural form.

Here are two examples of the formation of Lenape (or Delaware Indian) words:

nsalàpònhe	pënipahkihëleyok
në + sal + àpòn + he	pën + ipahk + ihële + yok
I + fry + bread + make	fall + leaf + action + plural
I am making frybread	The leaves are falling

How the Early European Settlers Viewed Native Languages

The early Europeans who came to America frequently concluded that the indigenous languages were less developed than those of the "civilized" Europeans. William Penn, one of the early Europeans to deal with the Lenape people, was of this mind. He stated that "Their Language is lofty, yet narrow... one word serveth in the place of three, and the rest are supplied by the Understanding of the Hearer: Imperfect in their Tenses, wanting in their Moods, Participles, Adverbs, Conjunctions, Interjections: I have made it my business to understand it" (Myers:22).

What Penn did not realize was that the "language" he learned was simply a jargon which had come into use some years earlier as a trade language between the Lenape, the Dutch, and the Swedes. The words used in the jargon were nearly all Lenape words, the grammar was extremely simplified, and the sentence structure was not unlike that used in Dutch, Swedish, and English.

Attempts to Obliterate Native Languages

Many Europeans felt that they had to make attempts to "civilize" the native peoples. One of the things they felt would accomplish this was to eradicate the native languages. Often Native Americans were punished for even trying to speak their own language.

Fidelia Fielding, a Mohegan elder, was the last speaker of the Mohegan-Pequot dialect. She saw the dissolution of the Mohegan's reservation in 1861 but remained one of the staunchly traditional members of the tribe... Memories of being beaten as a child for speaking her native language kept Mrs. Fielding from teaching young Mohegans the dialect... (AIL:4).

Ohëlëmitakwsi, a Lenape Indian also known as James Thompson, remembered mission school. He attended the school in the late 1870's. He said that one of the first things they did was to cut his long hair and to remove his earrings. When caught speaking Lenape with his friend, Willie Longbone, they were both punished by not being given their normal evening meal of tea and crackers.

Quoting another Lenape speaking about the Indian schools in the next century, Patricia

Donnell, says,

> "My mother... had been away from the family during school terms attending the Chilocco Indian Boarding School... it is regrettable she and other students were never allowed to speak their tribal language, nor even to wear any item of clothing or jewelry that was of native origin. The teachers... made efforts to totally erase any knowledge of their native culture and make them forget they were Indian... It is sad that these efforts sometimes resulted in the students becoming embarrassed about their ancestry" (Smith:58).

For a very long time the Native Americans have been told that their culture and language were worthless. This is what a Lenape woman named Touching Leaves had to say,

> "Now, in 1981, the plans of the Whites have nearly come to completion. The descendants of the Lenape are nearly all assimilated into the culture of the Whites. A sense of shame at being Indian has been instilled in our younger people. Even to this day the media portrays us as grunting, brutish savages whose main object in life was to kill, torture and molest the poor, peaceful immigrants who were struggling to eke out a life in the wilderness. To the media we do not laugh or cry, we do not mourn our dead, we do not rejoice for our newborn; we just dance and plot to kill. We have been defeated and pushed down to the dirt by superior numbers; why must we also have our faces rubbed in it?"

Writing the Languages of the Americas

Early attempts to introduce writing to the Native Americans did not meet with much success. In some cases it was because the missionaries were too strict and would not permit the converts to practice any of their traditional ways, such as dancing or use of herbal remedies. Because of these cultural restrictions, the number of people from Indian tribes who joined the missions where writing instruction was given was small.

Early in the 1800's a man named Sequoyah developed a very ingenious syllabary to use to write the Cherokee language. (This is still in use today, and can be seen in the book Beginning Cherokee listed in the Source Directory at the end of this article.) Less well known, but in very wide use today, is the Cree syllabary (illustrated following the text of this chapter) developed by James Evans in 1840. It has since been adapted to also write the Ojibwa, Chipewyan, Slave, and Innuit languages. A syllabary uses one symbol to represent a syllable, usually a consonant plus a vowel. An example from the Cree syllabary is < = pa.

Present Condition of Native Languages

A good example of the precarious state of Indian languages may be found in Oklahoma. In a recent publication by the American Indian Research and Development Center, the status of languages was divided into five categories. In Category I [languages spoken by relatively large

speech communities] we find that only Cherokee, Choctaw, and Creek/Seminole are listed.

In Category II [languages spoken by more than 100 persons, most of them over age 50] we find Comanche, Kiowa, Cheyenne, Chickasaw, Shawnee, Arapaho, and Kickapoo. In Category III [spoken by less than 100 persons, all fluent speakers over age 60] there are Caddo, Wichita, Pawnee, and Yuchi.

In Category IV [languages spoken fluently by only a handful of persons, all of advanced age] there is Ponca, Kansa, Kiowa-Apache, Delaware, Potawatomie, Iowa, Oto-Missouri, Sac and Fox, Chiracahua Apache, Ottawa, Osage, and Seneca. Finally, in Category V [languages probably no longer spoken fluently] there is Tonkawa, Quapaw, Modoc, Peoria, and Miami.

Looking northward to Canada we find figures showing that of "44,000 persons in 24 Aboriginal communities in Southern Ontario, only 1,620 spoke a First Nations[1] language fluently, and most were between the ages of 60 and 70. Figures presented in Saskatchewan likewise showed there are almost no Aboriginal people who can speak a First Nations language in the southern part of the province. Many reserves across the province were classed as 'extremely critical' and had few Aboriginal language speakers under the age of 50." (AIL:2).

Importance of Native Languages Today

Some may wonder why we should preserve native languages. First, it is a part of the history of North America. Many of the earliest transactions were conducted in the Native languages.

Second, it is but a small part of the total human experience. It is a piece of the overall picture of humankind. Recognizing and preserving native languages is an important part of celebrating and understanding cultural diversity.

Third, it is important to the culture of the people who speak it. With each language there is a special way of thinking, seeing, and imparting ideas. Some of the things done by a people of a given culture or religion can only be expressed in their native language. Is it any wonder that the early missionaries and government officials did their best to try and abolish the native languages?

Attempts to turn Indians into well-tanned whites have been only partly successful. In many communities and tribes there has been a surge of interest in the traditional heritage since the late 1960's. Many of the people who had been brainwashed into forsaking their Indian heritage have now returned to take part in traditional ways. This includes an interest in the language of their forefathers.

Many people also have an interest in the indelible mark left by Native Americans in the form of words that have been taken into the English language. Some of these words are: hominy, moccasin, moose, opossum, pecan, persimmon, raccoon, skunk, squash, succotash, tomahawk, wampum, and wigwam.

In addition to names for things, there are also many place-names. Of the United States, twenty-five have names of Native origin. Four examples are: Connecticut - meaning "Long River" - from Mohegan; Michigan - meaning "Big Lake" - from Ottawa; Ohio - meaning "Beautiful River" - from Seneca; and Wyoming - meaning "Expansive River Flatlands" - from Lenape, (named after the Wyoming Valley in Pennsylvania).

Lenape Language Preservation Efforts

Among the Lenape people in northeastern Oklahoma there were several attempts to save the language. One such endeavor was made in 1974 by Anna Davis and Elizabeth West who taught a class at the New Hope Indian Methodist Church in Dewey, Oklahoma. Other language classes were taught at Nowata, Oklahoma, from 1979-80, by Nora Thompson Dean.

The fact that the local language classes were reaching only a small number of the Tribal members caused Nora Thompson Dean (Touching Leaves), a Lenape speaker to develop several cassette learning tapes and booklets in 1980. The tapes were distributed through her business, Touching Leaves Indian Crafts (see the Source Directory), and are still available.

In 1985 Edward Leonard Thompson, the Ceremonial Chief of the Delaware Tribe of Northeastern Oklahoma also taught some language classes. In 1992 Lucy Blalock began to teach classes under the auspices of the Delaware Tribal Culture Preservation Committee at the Tribal headquarters in Bartlesville, Oklahoma. These continue today with this remarkable woman making the 180 mile round-trip from her home to come teach at the age of eighty-eight years.

Recent Government Steps Taken to Preserve Native Languages

It is only in very recent times that the United States government has changed the policy on Native American languages. In 1989 Senator Daniel Inouye authored a bill called the Native American Languages Bill. This bill was passed in October 1990, and the Native American Languages Act is now a policy declaration of the United States.

It provides that the United States will (among other things) 1) preserve, protect, and promote the rights and freedom of Native Americans to use, practice, and develop Native American languages; 2) encourage the use of Native American languages as a medium of instruction where appropriate; 3) recognize the right to use Native American languages as the medium of instruction in schools funded by the Secretary of the Interior; 4) recognize the right of Indian tribes to give official status to their language for the purpose of conducting their own business; and 5) encourage all school entities, elementary, secondary, and higher education, where appropriate, to include Native American languages in the curriculum.

In 1994 the United States government set aside $1,000,000 for the Native American Languages Act. This will be awarded as grants to the various tribes, and the grants may be used to 1) establish and support communities to bring older and younger Native Americans together to

encourage the transfer of language skills from one generation to the next; 2) train Native Americans to teach language to other Native Americans; 3) develop, print, and disseminate material for teaching Native American languages; 4) produce radio or television programs; 5) compile, transcribe, and analyze oral testimony to record and preserve Native American languages; and 6) purchase equipment.

Some people might think that this is a large amount to spend on such a project. Considering the amount of work to be done, and the short time left for some languages if nothing is done, this is a very small amount. The native languages are a part of America and Canada's past, and we spend millions of dollars each year to preserve old buildings because they represent a part of our past.

The recent Canadian policy states that, "Drawing on the treatment of Canada's current official languages, the Council called for the creation of an Aboriginal Languages Act, and Aboriginal Languages and Literacy Foundation, a Commissioner for Aboriginal Languages, and an Aboriginal bonus system for people speaking Aboriginal languages and working in government. Adequate funding for First Nations languages should be provided modeled on the funds provided for French language preservation outside of Quebec, the Council said. Grants would be available for artists writing in Aboriginal languages" (AIL:3-4).

The Teaching of Native Languages Today

There are four major reasons to teach native languages. They are: 1) to retain the language for future generations, 2) to maintain the status of the language as separate and distinct from other native languages, 3) to share the language with others who are from other tribal groups or non-Indians, and 4) to enhance the self-esteem and the image of the native child in his/her learning environment.

It must be stressed that in addition to teaching the native languages, other aspects of Native American culture should be taught to all children as well. Children who are not Native Americans may wonder why in some languages the same word is used for "great-aunt" and "grandmother." On the other hand, some native language speakers are puzzled by why English uses the same word, Uncle, for a "mother's brother" and a "father's brother."

Sometimes these differences can lead to humorous stories. Early in this century Touching Leaves came home from public school and asked her father, who had been sent to mission school, the following question, "Are these white people running out of words? Today at school we learned that 'spring' is a season of the year, and we also learned that 'spring' is something that water comes from, and 'spring' is also a thing found in a bed, and that we can 'spring' to our feet. They must be running out of words!"

In the United States there have been a number of successful bilingual education programs in recent years, especially among tribes with large populations and numbers of speakers. Hopefully it will be possible to see similar successes with the newer programs among the tribes which have

only a few remaining elders who can still speak their language.

In Canada, "Success was also reported from a pre-school Ojibway program offered in Winnipeg, Manitoba. At the Children of the Earth High School in Winnipeg, a parent talked proudly about how her daughter was learning her Aboriginal language at the school. 'I will relearn my language and my daughter will help me; when I do, my grandmother in the spirit world will be proud of me,' she said" (AIL:3).

What It Is Like to Lose Your Language

When asked by a white person what it was like to be one of the few people left who could speak Lenape, Touching Leaves replied, "Imagine yourself suddenly in a world where all you heard was Lenape. You turn on the radio or television and you hear only Lenape. You go to town and all you see are Lenape people. You try to talk to some of your younger white people, and they answer in Lenape, 'I don't understand that whiteman talk!' Wouldn't you long to hear your English language spoken again, even a few words?"

Now you, good reader, think about what this would be like. Then support the efforts to preserve our indigenous languages.

Endnote

1. Throughout the article there are various names used for the indigenous people of the Americas. In addition to American Indian, there is First Nation (which is popular in Canada) and Native American. Some people feel that Native American should mean anyone who was born in America. I would use "Native Americans" to refer to the aboriginal people, and "native Americans" for everyone else born here. Two earlier terms coined by anthropologists, "Amerind" and "Amerindian" never became popular.

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Smith, Sue. Recalling the Past, vol. II (Copan, OK: Sue Smith Publications, 1992).

Source Directory

Native American Languages Brochure (courses available in Cherokee, Chickasaw, Choctaw, Hawaiian, Kiowa, Lakota, Navajo, Passamaquoddy, Lenape (Delaware), Mohawk, and Tlingit). They also have *The Whole World Language Catalog* (courses in 91 languages from around the world), Audio-Forum, Guilford, CT, 06437. Phone 800-243-1234.

Beginning Cherokee, 1431 Valley Road, Bartlesville, Oklahoma, 74003. A book of 350 pages on the language is available. Cassette tapes are also available. Send a self-addressed stamped envelope for information.

Lenape Language Lessons, Touching Leaves Co., 927 E. Portland Ave., Dewey, OK, 74029. Complete catalog of Lenape Lessons, music, and other books and items. Send $1.00 to cover cost of the catalog.

Other Possible Sources

Lunaapeew Dictionary: Basic Words, Part One (Munsee dialect of Delaware), contact Dianne Snake, Delaware Nation, Moraviantown Reserve, Ontario. Phone 519-692-3936.

Learn Ojibway by Basil Johnston. 35 hours on 29 tapes. Write to Basil H. Johnston, c/o Tibby Johnston, R. R. 5, Cape Croker, Wiarton, Ontario, N0H 2T0, Canada.

Survival Ojibwe by Patricia Ningewance. 244 pp. book with a cassette tape. Write to her at Box 33026, Winnipeg, Manitoba, R3G 3N4, Canada.

Sisika languages series kit, Level 1 (Blackfoot language) by Vivian Ayoungman & Emma Lee Warrior. Extensive materials. Phone in Edmonton, Alberta, Canada, Phone 403-488-1390.

Let's Talk Cheyenne by Ted Risingsun & Wayne Leman. Booklet plus cassette tapes. Write for list of available materials to Cheyenne Christian Education Project, Box 37, Busby, Montana, 59016.

Anishinaabemodaa (Ojibwe) and also *Ininimotan (Swampy Cree)* Introductory courses each with a tape. Manitoba Assoc. for Native Languages, Phone 204-943-3707.

Classroom Activities
prepared by Kentucky educators

2.17: Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world. 2.27: Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they may interrelate.

Have students read the following passages about Sequoyah from books by Kohn and Patterson. These stories are highly interpretive and not meant to be historical representations, but they will allow students to imagine the accomplishment of this great man. Discuss the steps that Sequoyah took to create a syllabary of the Cherokee language. How is a syllabary different from an alphabet? Imagine how difficult it must be to construct a system to allow an ancient language to be written for the first time. Sequoyah's syllabary was so complete yet so simple that most Cherokees could learn it completely in a few months. With this new written system, the entire Cherokee Nation was able to communicate by writing in a way that all could understand.

Students will say their own name aloud and decide how many syllable sounds it has. They will write their name leaving spaces between each syllable. Then they will work independently to create, on index cards, a symbol for each syllable in their name. On each index card, they will write one syllable of their name with the symbol directly beneath it. The symbols may be very creative or very simple, like Sequoyah's. Finally, students will write their name, in symbols only, on a new sheet of paper.

Working in groups of four, students will be handed a set of papers (a sheet with a name written only in symbols and a set of corresponding syllable/symbol index cards) from another student in the group. The exchange must be done so that the student does not know who prepared the set they are holding. Their task is to use the syllabary cards to decode the name written on the sheet. For a more challenging, subsequent activity, have students perform the same task with a sentence from a story or a mystery phrase. (PE--Elementary)

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The following passage is from Talking Leaves: The Story of Sequoyah, by Bernice Kohn (1969):

Sequoyah thought and thought--and then one day the idea came. Of course! All words are made up of sounds. He didn't need a sign for every word but only for every sound. By putting the sounds together, any word could be formed.

Sequoyah set to work right away to find out how many sounds there were in the Cherokee language. He spoke each sound out loud so he could really hear it. His friends began to look at him strangely. They thought he was talking to himself!

Then Sequoyah found a child's spelling book. At last he held in his own hands the white man's talking leaves. Perhaps he could learn the magic. He decided to copy some of the letters on bark.

Several of them looked prettier upside down or sideways, so he drew them that way instead.

Sequoyah began to work night and day. The pile of bark sheets grew higher and higher. But Sequoyah wasn't interested in anything else, not even the farming.

The medicine man could not understand what Sequoyah was doing. He began to speak against Sequoyah. He said that Sequoyah was making bad magic for the tribe. Sequoyah's wife became angry at Sequoyah because no one liked him anymore. She swept up all of the pieces of bark and threw them into the fire.

At first Sequoyah was very upset, but soon he started to work all over again. At last Sequoyah was finished. He had made a sign for each of the syllables in the Cherokee language. Sequoyah had invented a syllabary, which is very like an alphabet.

An alphabet has a sign for every sound in the language. A syllabary has a sign for every syllable. There were eighty-six signs in Sequoyah's syllabary.

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The following passage is from Sequoyah: The Cherokee Who Captured Words, by Lillie Patterson (1975):

"Ha-ya!" Sequoyah swung her high into the air. "I do not need a different sign for every single word. I can break our Cherokee words into parts. All I need is a sign for the sound each part makes."

"Oh, can I help?" Ah-yoka asked.

"Indeed, you can," Sequoyah answered. "You are young, but you think quickly. You have keen ears and sharp eyes."

Sequoyah began to draw. "Sequoyah," he sang his name. "Se-quoy-ah. It has three parts. I can make a sign for each. When I put the three signs together, they will show my whole name."

"Can you show me my name?" Ah-yoka wanted to know.

"Ah-yo-ka," sang the Lame One. "Ah. The first part of your name is like the last part of mine. They will take the same sign. I can use the same symbols for the same sounds in different words."

"How many signs will you need?" Ah-yoka asked.

Sequoyah tried to find the answer in the months that followed. He tried to remember all the words he had ever said or heard. He broke each word into parts, or syllables--"Hee-tun-hah-yu-hoo." He said each syllable while Ah-yoka listened. Then she sounded words for him to hear.

He was working on a way of writing called a syllabary. It is like an alphabet, yet different. An alphabet has a sign for any one of the tiny sounds that make up a word. Each letter stands alone. A syllabary has a sign for each spoken syllable. For example, an important city in Tennessee has a Cherokee name, Chat-ta-noo-ga. It is spelled with eleven letters of the alphabet. It is written with only four of Sequoyah's symbols, or letters.

Sequoyah counted 100 of these big sounds, or syllables, in the Cherokee language. After that he decided on a symbol to match each one. He picked out many of the letters of the alphabet, chiefly the big letters, or capitals. They were easy to make. Sequoyah used English letters, but he gave them Cherokee speech sounds. He also made up signs himself.

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2.16: Students recognize varying social groupings and institutions and address issues of importance to members of them, including beliefs, customs, norms, roles, equity, order, and change.
2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Students will write a piece for their writing portfolio which defends the position of the importance of preserving native languages. (The writer takes a stand and supports that position with related facts to make it valid.) Include examples of language preservation programs which have been successful in North America. Or, alternatively, students will create and present a plan for the preservation of native North American languages in their school and community. **(P--High)**

2.27: Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they may interrelate.

To help students understand the importance of communication and understanding among peoples, have students spend a day or part of a day trying to communicate without words. (The teacher will take part as well.) Following the experience, discuss such things as:

1. Was this as difficult as you thought? More? Less?
2. How did you "work things out" in a particular situation during the day?
3. Why is being able to communicate important?
4. What are some alternative ways to communicate without words?
5. Why is it important to preserve a particular culture's language? Do you think it is important or can a culture be preserved without its language? Can ideas be expressed in other ways?

(PE, OE--Elementary)

2.27: Students complete tasks, make presentations, and create models that demonstrate awareness of the diversity of forms, structures, and concepts across languages and how they may interrelate.
2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions for a better future.

Each student will prepare lists of words and place names now used in English which derived from Native American languages. They will share their lists with the class. As a class, prepare a list of Indian place names in Kentucky (cities, lakes, parks, neighborhoods, etc.). **(PE--Middle)**

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Students will write papers for their writing portfolios and make presentations on researched aspects of Native American languages. Some suggestions:

1. Research the use of Native American languages (particularly Choctaw, Navajo, and Comanche) as codes during World Wars I and II.
2. Demonstrate an understanding of the fact that most Native American nations are commonly referred to by tribal names given them by outsiders. They have different names for themselves in their own languages. Report on the recent efforts of Native American nations like the Tohono O'odham (formerly the Papago) or the Navajo to change their tribal names.
3. Research the 1990 Native American Languages Act. Contrast this government policy with past government policies which tried to suppress native languages, for example, the 1880s policies which called for the exclusive teaching of English in schools and which forbade all communication using native languages.
4. Research the education of Native American children in boarding schools and the impact this had on Indian individuals, families, and communities. You may want to include the Choctaw Academy in Great Springs, Kentucky (near Georgetown, 1818-1842) in your account.

(P, PE--Middle [#s 1 & 2], High [#s 3 & 4])

2.17: Students interact effectively and work cooperatively with the diverse ethnic and cultural groups of our nation and world.

Write a story about a day when your language is taken away. How would you feel? What daily activities or events would be difficult if suddenly no one spoke or read your language? **(P--Elementary)**

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions for a better future.

Using various resources, create a class map of the location of various Native American languages and language families. Recognize the diversity of native North American languages and discuss how this is one illustration of the cultural diversity of Indian peoples. How would a language map of pre-Contact times compare to a post-Contact period, or even a recent language map? **(PE, OE--Middle)**

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

Discuss the importance of native languages in all cultures. What languages, other than English, are spoken in your school, community, country? How do we discourage or encourage the use of languages other than English? How important is it to preserve languages?

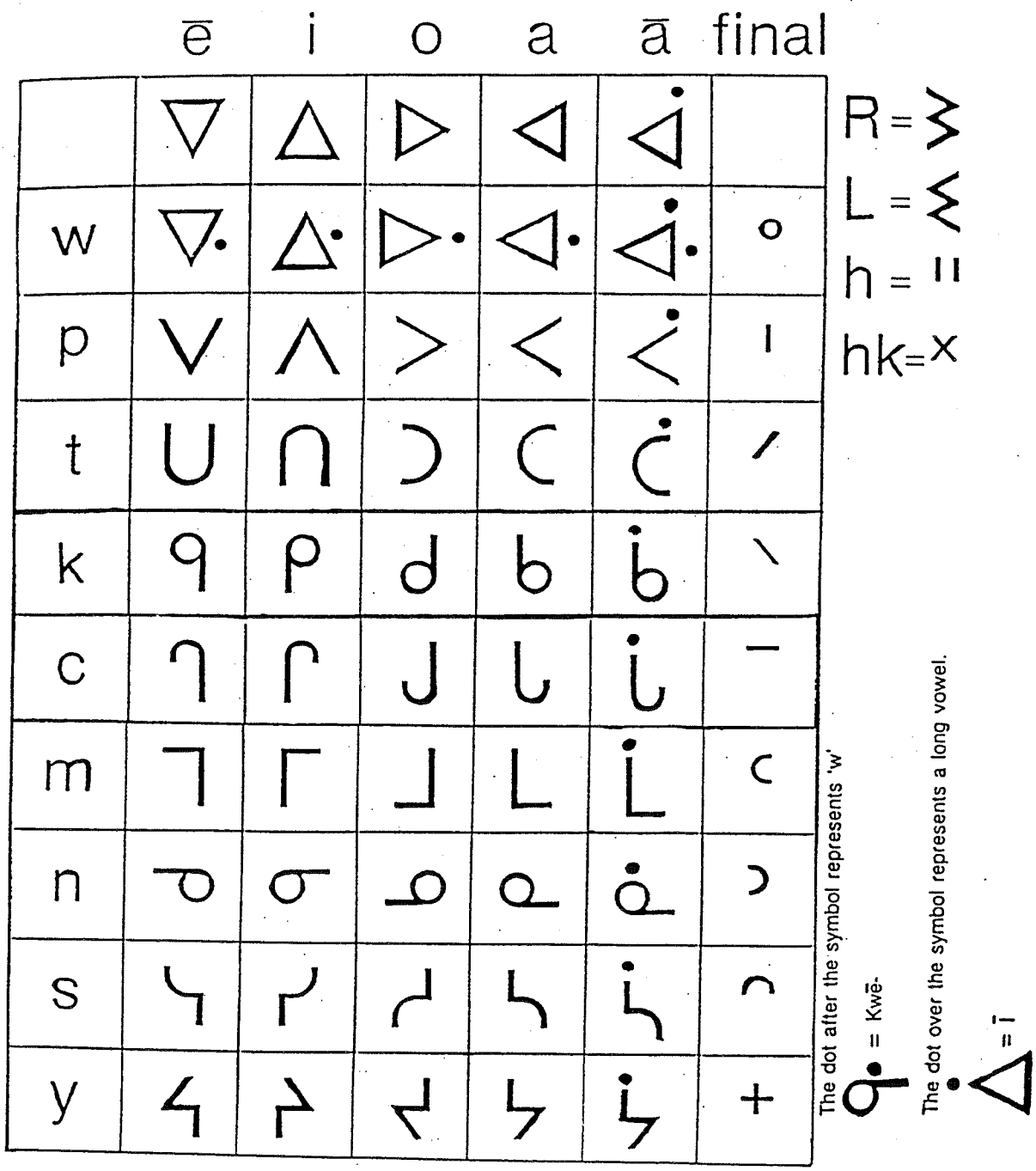
Students will interview members of their family, particularly older members, to learn about the language history of their family. What languages were once spoken? Does anyone speak them now? What words or phrases from other languages are still used by your family? Share the results of these family interviews with the class.

Invite guests to the classroom who speak English as a second language. How important is their native language to them? Have the guests describe what it was like to learn English. How does English differ from their native language? Did they ever feel discriminated against or discouraged to use their native tongue? Ask the guests to teach the class words, phrases, or songs in their native language. **(PE, OE--Elementary, Middle)**

2.2: Students identify, compare, and contrast patterns and use patterns to understand and interpret past and present events and predict future events.
2.26: Students recognize differences and commonalties in the human experience through their productions, performances, or interpretations.

Collect samples of writings and recordings in various languages. Describe the sounds or visual appearances of each language. Is it possible to classify them in some way based on their written alphabets or sounds? Research the historic connections between languages and prepare a chart illustrating the relationships between various language groups in the Indo-European language family. Which languages are derived from old German, which from Latin? Listen to or read samples of languages derived from the same ancient language (such as English and German or Italian and Spanish). How are they alike? **(P, OE--Middle, High)**

CREE SYLLABICS



The Cree Syllabary

Chapter 7

Traditional Delaware Music

by Don Secondine

Introduction

Traditional Native American music was and still is an important part of culture and daily lifeways. Although each nation has its own musical traditions, just as other cultural traditions are unique from nation to nation, many Woodland Indian tribes made similar instruments and applied music to their daily lives in much the same way. This chapter focuses on the writer's own tribal music tradition, that of the Delaware people. The archaeological evidence in Kentucky and throughout the Ohio Valley shows that prehistoric peoples made and used percussion instruments such as turtle shell rattles (gourd rattles and drums were probably also common) and woodwind instruments, primarily the flute. Ancient flutes were tiny (just a few inches long) and were carved from animal bone. In this region these instruments date back as far as the Archaic Period (7,000-1,000 BC) and were an important part of ceremonial life.

The Delaware Indians, at European contact, lived along the Delaware and Hudson Rivers in what is now southern New York, Delaware, Pennsylvania and New Jersey. "Lenape" is the name Delaware Indians call themselves. It means "original people." They were farmers, hunters, and fishermen who also gathered wild foods. The Hudson and Delaware River valleys were deeply forested at that time, except for those areas that had been cleared for fields and villages. Many of the tools, toys, and utensils were made from forest products. The musical instruments were no exception. Drums, rattles, whistles and flutes were, and still are, the musical instruments of the Delawares.

Percussion Instruments

There are several kinds of traditional drums and rattles in use today. Water drums that are carved out of a piece of tree branch are hollow but only open on one end. This deep wooden bowl is then filled about one-half full of water, then the top is covered with a piece of deerskin that has been soaked in water. This type of drum is played by one person at a time and has a nice sound to it. The water drum is played at social dances and some ceremonial dances. Another type of drum is simply a rolled-up deer hide that is lashed together with rope and wooden slats. This drum is used in high ceremonies and feast dances. It delivers a clacking sound or a thumping sound, depending on whether the player strikes the rolled hide or taps the wooden slats. Wooden drumsticks are used with both of these drum types. Yet another kind of drum traditionally used by the Delaware was a single head drum, constructed of a wooden hoop and a single piece of rawhide stretched over it and allowed to dry until hard. This style of drum was traditionally played by one singer at a time, usually in preparation for war. (The men who perform traditional

music are called "singers" for their voices are their instruments as well as the drums and rattles. Vocal music is very important to Indian ceremonies and to be a singer is a great honor.)

Rattles are made of all sorts of materials. Snapping turtles are used to make turtle shell rattles. The head and neck are stretched out to dry and form a handle, and a few pebbles, dried corn kernels or dried beans are placed in the shell. The leg holes of the turtle are then sewn shut. This type of rattle is pounded on a log laid on the ground in front of a row of singers. These rattles were also traditionally used by Iroquois tribes of New York and perhaps other Woodland peoples. Rattles were also made by simply inserting dried corn kernels or beans in a terrapin shell and tying it shut with a rawhide thong which passed over the back of the player's hand when the back of the shell rested in the palm of the hand. These shells were used in ceremonial dances only.

Another type of terrapin shell rattle is worn below the participants' knees in layers, lashed together in rows around their calves. These rattles are used during social dances that the Delawares call "Lead Dance" or "Stomp Dance." There is also a hand-held rattle made of gourd or a section of cow horn, with a stick that goes up through the center, forming a handle. These are capped off to hold dried beans or corn kernels inside and are shaken in time with the songs. For a different percussion sound, deer toes were tied to sticks and shaken as hand-held rattles.

During all kinds of dances, both social and ceremonial, Delaware men wore garters or kneebands made of deer toes. These were rattled to the tempo of the songs as the men danced.

The Traditional Flute

Of all the musical instruments of the Delaware, the flute (*ah'pikon*) is the only instrument on which one could play a tune. While the flute is a woodwind instrument, all other Delaware instruments were in the percussion family. The word *ah'pikon* translates as "musical instrument." When the old Delawares saw and heard their first piano, they threw their hands over their mouths and exclaimed, "*Ahpikon, Ahpikon!*" Today the piano is called *Ah'pikon*, and the traditional flute is called *Lenape Ah'pikon*, or musical instrument of the original people. The *ah'pikon* is about eighteen to twenty inches long and has six note holes.

The fipple (or reed) of the Indian flute is very unique in design. There are two types of fipples found on Native American flutes today that the author has found on antique flutes. In the most common arrangement, the reed is directly under the tuning block or "bird," as it is sometimes called. Hereinafter, this style will be referred to as a plains style fipple. In the other type, found on Lenape flutes, the reed is placed just in front of the tuning block. The reed is not a true reed as in an oboe or clarinet, because it does not vibrate. It serves

only to split the wind or breath as the fipple of a whistle does. This latter style is called the lenape style.

The reed on the plains style flute is rectangular in shape with a rectangular hole in the center large enough to fit over two square holes on either side of the solid wall that divides the flute into two chambers. The first chamber is about five inches long and the thickness of the wall is about 3/8" to ½". The first square hole on the near side of the wall is ¼" x ¼". The hole on the far side of the wall from the mouthpiece is ¼" wide by about ½" long. The tuning block on Indian flutes is commonly carved to look like a bird sitting on its nest. Thus the flat part of the flute that the bird and reed sit on is called a "nest."

The Lenape fipple system is basically the same as the plains system except that the bird sits directly on the nest with the reed lashed to the flute just in front of the bird. Since the Lenape *Ah'pikon* reed has no rectangular hole in it to allow the breath to flow over the wall in the flute, a small sliver of wood must be cut away from the top of the wall or a wind channel must be cut in the bottom surface of the bird.

The Lenape reed is simply a flat piece of lead, brass or German silver lashed to the flute. Before European contact, the reed was made of a large feather quill butt, which was split and steamed flat. The Lenape reed serves only to lengthen and shorten the square hole on the far side of the wall while tuning the flute for best volume and clarity of sound. In other words, it is a movable front edge of the hole, where the wind is split to make the music. Native American flutes are hollowed out in halves. Care is taken in hollowing the flute halves so that when the halves are glued together, a solid wall is formed. The old flutes were made from a thick red cedar branch. When the white part of the wood was shaved off, the red part, or heart wood, was about 1½" in diameter. This was split very carefully, lengthwise. Indians did not have elaborate wood carving tools in those days. So they hollowed the halves by charring the part they wanted to remove, then scraping out the charred area with a beaver-tooth chisel. This is the same process that was used to manufacture dug-out canoes. Dug-outs were made from tulip poplar.

Early European explorers reported in their journals that the Delaware Indians played reeds and danced for their own amusement. Although the use of the flute in this way is beyond the memory of living Delaware descendants, the Delaware people still use the flute today. The flute is played for personal entertainment and to entertain friends, though not while dancing, as was reported in earlier times. The flute is a solo instrument, not played in multiples. The Indian flute has never been standardized as have European instruments. Each flute has its own personality. Each flute maker makes his flutes to his own specifications. Today we use rulers to lay out where the holes should be. In the old days, flute makers used the width of their hand and the width of their thumb when determining where the holes should be located. Everyone's palms and thumbs differ in size. Variations in the placement of holes and the flute's inside diameter determine the pitch the flute will have, thus standardization of the traditional flute would be next to impossible.

Because the flute is also used for courting, another name for the traditional flute is the "Love Flute." When a young man wanted to spend some time with the lady of his dreams, he would play the flute within hearing distance of her cabin. She would know which man had come to court her by the tune that was played. If she wanted to see this young man, she would go out to meet him, usually with an aunt or grandmother following at a short distance to ensure that the young man used his best manners.

Some songs played on the flute were lullabies for babies. Lullabies are, most often, short tunes that are played over and over again until the child goes to sleep.

Traditionally, the flute was only played by men, and only men were flute makers. (There is one woman flute maker today, but this is not traditional.) Today some women play the flute, but it is still frowned on by traditionalists for women to play the flute in public. The old Delawares did not play the flute after it started to get dark. They believed that it might disturb the rest of the departed. So out of respect for the dead, it was not played from dusk until morning.

The earliest surviving specimens of Lenape *Ah'pikon* are found in the Smithsonian Institute in Washington, D.C. One flute in particular was collected at Fort Pitt in 1760. There is no difference in construction or design from this circa 1760 flute and Delaware flutes made in this century. Delaware flutes have not changed in 250 years. It is possible that earlier Lenape flutes were made from native river cane, but this is only conjecture. No such specimens from this culture have survived to this century, river cane being very fragile. (Under rare conditions, such as in the cool and constant environments of caves, river cane flutes have been found. One such flute, made by one of Kentucky's indigenous cultures, was found in Mammoth Cave a few years ago.)

The traditions of Delaware music are certainly long-living ones. Although we cannot trace the origins of the drums, rattles, and flutes throughout our long history, we still tell stories about how music became a part of our culture. One such story follows.

A personal note from the author:

I would like to say here, in defense of my Grandfathers, that they were a peaceful people. They were not the barbaric savages that history and Hollywood have painted them to be. They loved their families and provided for them, and they fought in every way possible to protect them and tried to preserve the land on which they lived. They were patriots in the truest sense of the word. They fought an intruder when they knew they could not win. Traditional music is a small part of their rich legacy which we continue today.

A Flute Story
from Iroquois oral traditions

There was a young man who lived in a village east of the Allegheny Mountains who was in love with a girl who wouldn't have anything to do with him. Maybe she thought he was stupid or ugly, or maybe he didn't have enough wealth. Anyway, this young man was so in love with her that he was just sick. He went to her wigwam and she would not come out to see him. Her mother told him to go away. His heart was on the ground so he went out to the forest to be alone. That is what men did in those days. When a man was troubled about something, he would go off to be by himself. This young man went deep into the forest for several days journey.

One day he heard a beautiful sound that he had never heard before. He followed the sound to see what it could be. The closer to this sound he got, he heard a tapping sound with it. These two sounds brought him to a giant red cedar tree. Some say it was the same red cedar tree that our first father and first mother grew into being from...our ancestor, the red cedar, that sits in the middle of this great island that we all live on today.

As he looked up into this red cedar tree, he saw a woodpecker tapping and pecking for food for his breakfast. In the process, he had pecked some holes in a hollow limb. The wind blowing through this hollow limb was making the first flute music that this young man had ever heard. This same beautiful sound that had gotten his attention in the first place.

The red cedar, being our ancestor, knew what was disturbing this young man. The red cedar told him to take the flute and to practice the songs that he had heard and go home to play them for this lovely girl.

All the way home he practiced the songs he had heard in the wind. He stepped proud when he went home because now he had some hope.

When this young man got back to his village, he played these songs for this young girl outside of her wigwam. She heard the music and followed it. And there, lo and behold, was this same young man she had turned away, playing this beautiful music.

She must have thought, "My, what an ingenious person." Anyway, the magic in the flute worked and she fell in love with him.

Now Delaware and Shawnee towns were small in those days and everybody knew each other. Everyone knew how this young lady had treated him before, and now they saw this change. All the other young men came to him and wanted flutes, also. That's how the tradition got started. It still works.

Resources

A wide selection of Native American music tapes may be ordered from Canyon Records and Indian Arts, 4143 North 16th Street, Phoenix, AZ 85016 (602)266-4823. Indian House is another resource: P. O. Box 472, Taos, NM 87571 (800)545-8152.

Contemporary Indian flute music may be found in popular record stores. Carlos Nakai and Kevin Locke are two of many performers.

Two archives which include Native American musical recordings are: The Archive of Folk Culture, Library of Congress, Washington, D.C. 20540 (202)707-5510 and the Indiana University Archives of Traditional Music, Morrison Hall, Bloomington, IN 47405 (812)335-8632.

Classroom Activities

prepared by Kentucky educators

1.4: Students construct meaning from messages communicated in a variety of ways for a variety of purposes through listening. 1.14: Students construct meaning and/or communicate ideas and emotions through music.

Listen to various cassette tapes of traditional and contemporary Native American music in the classroom. Discuss your feelings as you listen. What does this music say to you? What do you think the Native American who is creating this music is feeling? What is this song about? Describe three actions that come to your mind when you hear this music. What kind of words would you put with this music? What pictures come to mind as you listen? Use your imagination to create a drawing illustrating your feelings about one of the songs. **(P, PE, OE--Elementary, Middle)**

Listen to several cassette tapes of traditional Native American music. Look for tapes that have descriptive notes and accompanying materials to help with identification of pieces. In small groups, students will categorize each selection they hear as lullaby, love song, war song, dance/ceremonial song. Why was a category chosen? Did students in the group disagree when determining categories? Describe the rhythms, repetitions, and pitches of each piece. Can you identify the instruments used? Create a chart to classify the songs according to types with separate columns for characteristics assigned and instruments heard. Compare and discuss results. (This exercise may be applied to the music of many cultures. Students could classify and compare music types across cultures and write a paper discussing a multicultural musical comparison.) **(PE, OE, P--High)**

Listen to traditional tapes and classify music as above. Students will prepare a tape pairing traditional Native American songs with contemporary popular music. Each pair of songs should have a similar sound or cause a similar emotional reaction or interpretation. Students are encouraged to employ different genres of popular music (rock, pop, rap, country, classical, r&b, jazz, etc.). Written notes explaining the pairings and providing background information should accompany the recording. Discuss the importance of lyrics to classifying the categories. Compare some music without considering the lyric (instrumental, classical, opera in a foreign language). Discuss how emotion and message may be expressed by instrumental interpretation alone. **(PE, P, OE--High)**

1.15: Students construct meaning and/or communicate ideas and emotions through movement.

Create interpretive dance performances or movement exercises to accompany traditional or contemporary Native American music. **(PE--Elementary, Middle, High)**

View performances of Native American dance (great resources are the videos produced by the American Indian Dance Theater). Discuss how the music and movements work together. Discuss regional differences in Native American dance. **(OE--Elementary, Middle, High)**

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, personality, and society of the arts and humanities.

Discuss the ways in which Native American people use music as a part of their daily past and present culture and how certain instruments, rhythms, or songs relate to specific events (religious ceremonies, social gatherings, courting rituals, etc.). How does music play a role in our daily lives? What songs or types of music are associated with our daily events or activities (weddings, parties, sports events, bedtime...)? Select several functions or types of music in native culture (military/call to battle, religious/prayer, group social dance, lullaby). Ask students to name songs or bring in tapes which serve these functions in our culture today. **(PE, OE--Elementary, Middle)**

1.11: Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through writing.

Read "The Flute Story" to the class. Ask students to write a story for their portfolio about another native instrument or about an instrument they created using contemporary materials. **(P--Elementary, Middle)**

Some Guidelines and Suggestions for Making Musical Instruments

Students should be encouraged to make instruments, but what they make should be as authentic as possible. Choose an instrument that could be made with the most available natural materials or authentic manmade substitutes. Consider that Native Americans almost exclusively made their traditional instruments from plant and animal resources. The concepts of adapting natural materials to functional items and using each and every part of a plant or animal are essential to native culture. What kind of everyday materials can the students discover to substitute for natural materials (think of recycling packaging and "finds" from the garbage)? Discuss the challenges and particular problems associated with substitute or natural materials after the students' instruments are completed. What trial-and-error was necessary? How could the sound be adjusted and improved?

Follow traditional guidelines as to the decoration of instruments you create. Discourage the use of symbolic or ornate designs on the instruments as this was not traditional. Instead of making the instrument a decorative object, focus on its function as an instrument, i.e., have the culmination of the unit be a "concert" to play and listen to the different sounds of the instruments or discuss the process of finding substitutes for traditional materials, emphasizing the aspects of Indian tradition.

The next six suggested activities may apply to the following outcomes:
2.22: Students create products and make presentations that convey concepts and feelings.
2.23: Students analyze their own and others' artistic products and performances.

To make "turtle shell" rattles: Fill cardboard oat boxes (with the sides cut down to about 2-3 inches) with small amounts of dried beans, seeds, or corn and seal them shut. (Other types of cardboard boxes may be used.) Decorate the surface with the markings of a turtle shell. If students fill their rattles with different materials, compare the sounds each makes. Can you guess the contents by listening to the sounds? **(PE, OE--Elementary, Middle)**

Hand-held rattles may be made by attaching objects to a thick stick or handle. The objects should be tied around the circumference of the handle, using thongs or strings of a similar length. When the rattle is twisted (using quick movements of the wrist) or shaken, the objects will knock together, creating the sound. Deer toes (dewclaws) were traditionally used; try thick nut shells, marine shells, large wooden beads, metal bottle caps, etc., for different, creative sounds. **(PE--Elementary, Middle)**

Older students may be able to make flutes from cane. Work with the music instructor to find creative ways to design the instrument for the most authentic sound. The only traditional surface decoration on Woodland flutes is wide bands of yellow and red. Some flutes, however, are carved with three-dimensional forms. The mouthpiece of one type of

Iroquois flute resembles the head of the woodpecker, honoring the legend presented in "The Flute Story." **(PE--Middle, High)**

Dance whistles are more modern Native American instruments, growing from the tradition of using flutes and whistles to call people together for war councils or ceremonies. Older students may wish to make a dance whistle the modern, but resourceful, way that Don Secondine did as a child: Take a piece of copper tubing. Cut a v-shaped notch in one end with a metal file. Create a ramp on the inside by blocking the tube with chewing gum or beeswax. This will make a great whistle sound. The whistle may be decorated with dangling ribbons or feathers. **(PE--Middle, High)**

Drying gourds to make gourd rattles is a time-consuming project requiring knowledge about gourd harvesting and drying, but it is possible. Gourd rattles are used in many cultures and are often available at import shops. Look for other percussion instruments created in different cultures. Students who have such instruments should share them with the class and discuss their materials, sounds, decorative elements, and origins. **(PE, OE--Elementary, Middle)**

After the students have completed their instruments, divide them into small groups to create a short selection of music with the instruments. Perform the pieces for the other groups and have them ascertain and discuss the type of music performed. **(P, OE--Middle, High)**

2.2: Students identify, compare, and contrast patterns and use patterns to understand and interpret past and present events and predict future events.

Students may make drums from many materials. If students create drums using a variety of materials, they can compare the sounds each makes. How does a animal skin drum sound? How are drums in various cultures made? Compare their sounds. What are used to make modern manufactured drums? Water drums are one type of ceremonial drum. Using containers which will hold water, make "water drums." Vary the levels of water each holds and compare the sounds. Challenge students to create a scale by using different levels of water.

Chapter 8

The Significance of Basketry

by Gwen Yeaman/Meda Kikalakaniqua[1]

Introduction

What is a basket? It is a tool that has answered many human needs from at least 9,000 B.C., although some archaeologists believe this date could be as early as 18,000 B.C. Baskets were created and used by humans to gather, store and even cook food, to hold important belongings, and to carry possessions to a new home. Some baskets were made by native people to carry earth to the site were an earthwork or mound was being created, while others were designed specifically to catch fish. The diversity of basket forms shows the true ingenuity of native peoples. Baskets are "ancient companions" which still play a large role in lifeways around the world, although in some cultures its physical appearance, structural make-up, and function have changed and evolved with the passing of the centuries, just as we have.

Baskets have been created in many shapes and sizes, their form reflecting their intended use. Many natural materials may be used to make a basket, and native peoples prepared baskets from the natural materials found near their camps and villages. The native people of the Woodland Region of the United States, from the east coast to the Mississippi River, had an abundance of hardwoods available to them, and here, a rich tradition of hardwood basketmaking flourished for hundreds, even thousands, of years.

The techniques associated with basketmaking--twining, coiling, weaving--are similar to the techniques used to produce other goods from natural fibers. Creating cordage, weaving fabrics, even constructing a bark canoe, involves many of the natural materials and techniques used to make baskets. Textiles are woven like some baskets, though of much finer fibers. In prehistoric times, these finer natural fibers were woven into cloth for clothing and accessories, slippers, floor and sleeping mats and coverings for frame dwellings. During the Mississippian Period hundreds of years ago, walls made of woven saplings were covered with mud plaster. This technique, called wattle and daub construction, created strong and solid walls for homes.

Baskets are still made today, and the forms and techniques found in America today are a combination of old and new traditions: Native American, European, Asian... Baskets are not, however, as important to our daily lives as they were in ancient times. Containers made of modern manufactured materials have replaced most of the baskets once used for storing and carrying things. Today, baskets are often collected and displayed as treasured art or craft objects, appreciated more for their beauty than their utility. In Native American culture, however, there are efforts underway to study, re-learn and preserve past basketmaking traditions and to recognize

[1] The suggested Classroom Activities are interspersed throughout this chapter. They were written by Gwen Yeaman, Stephanie Darst, and a panel of Kentucky educators.

the important place of the basket in the daily lifeways, cultural evolution, and aesthetic traditions of the native people.

Native Beliefs and Spirituality

Many Woodland Indian groups, as well as indigenous people of other regions, believe that the Creator of the universe gave us everything we need to survive. The Creator gave us food, materials for tools, and teachers from which to learn. Our teachers come in many sizes and shapes, and we respect them all equally. Wisdom comes with experience, knowledge and age. The most wise are our elders whom we often refer to as Grandmother or Grandfather.

Traditional native people give animals the same respect they give to humans. They see animals as vital parts of nature and the world in which they live. Animals thus are viewed as worthy of their respect. The spider is a part of creation, and therefore, has a vital purpose. Because native people learned from the spider, some call the creature by the respectful title, "Grandmother Spider." By observing the spider, native people learned to weave a round-bottom basket beginning with the radiating spokes and weaving them all together in spiraling circles that grow larger and larger, like a spider's web.

Other patterns, forms or occurrences in nature have served as the basis for human creations. For instance, by observing birds that weave the tightest nests, native peoples learned how to create baskets to hold nuts, berries, salt, and other precious commodities. In the Plateau region, baskets were even woven tightly enough to hold water. What other lessons can you think of that can be learned from animals, plants, cycles and seasons?

Classroom Activities

2.2: Students identify, compare, and contrast patterns and use patterns to understand and interpret past and present events and predict future events.

Initiate a discussion or prepare a written piece answering the question: What lessons can be learned from observing patterns and techniques in nature? **(OE,P--Middle)**

1.11: Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through writing.

Some Native American tales and legends describe how humans learned how to do things or how to make things from animals or other natural sources. The tales usually describe the animals as having human characteristics, able to communicate their knowledge to humans in supernatural ways. Messages or morals are often a part of these stories. (See "The Flute Story" in Chapter 7 of this publication as an example.) Create a tale about how humans learned to make a certain

basket from Grandmother Spider or from a bird. **(P--Middle)**

Baskets as Clues to Past Cultures

By studying the baskets of past cultures, we can learn much about the people who made them: what they ate, where they lived, and what goods were important to them. Geography and agricultural practices may be examined and studied through baskets used in a region. If you live in a very steep or hilly area, for example, hand held baskets might be difficult and dangerous to use when working on steep slopes. If you live in a great, vast flatland, a single basket carried on your back might not be adequate to help you gather all of your crops or tend to your large fields. Baskets have been developed and revised to aid humans in the process of fulfilling many basic needs of everyday life. They are highly specialized tools that reflect both their intended use and region of origin.

History

Hundreds of styles of baskets and numerous cultures are a part of Kentucky's long history. The Native Americans living here developed their own basket traditions, using local resources and creating forms which met local needs. These needs and the baskets made in response to them changed over time. During the historic period it is safe to say that, many more basket forms passed through this region aboard flatboats down the Ohio River. And even more came through on wagons full of personal belongings destined for the new homes they would help establish. In these ways, basket traditions evolve and change. Baskets from other places influenced the baskets here, and new baskets became associated with this area.

Historical occurrences such as wars, the agricultural and industrial revolutions, and climatic or extreme economic changes are evidenced in material culture, the human-made goods or all things produced by the people of a culture. The selling or trading market reacts to these changes and responds accordingly. Hard economic times may cause a paring-down of extra or unnecessary details. Some markets cannot withstand the extreme changes and they collapse, taking with them particular tools such as tobacco drying baskets, fisherman's baskets, etc. These individual or small communal enterprises give way to sophisticated state-of-the-art machinery and systems and mass production.

After contact with European traders and settlers, the native people began producing baskets for others and wove styles that were in demand but were not necessarily familiar to them. Baskets were traded as many other things were, for European iron kettles, trade cloth, etc. Baskets were a form of barter or currency in some areas. Everyone used them, but few people had time to search for and process materials, then spend hours creating the baskets themselves. In many areas, highly skilled basketmakers created and repaired enough baskets to support their families. With the rush of foreigners to this land and the onslaught of foreign goods that soon followed, baskets began to take a back seat to tin buckets and wooden trunks. Ships from the Orient brought wicker work and rattan baskets and containers that were woven of cheaper

materials for pennies on the dollar. Eventually the native baskets were considered to be an old, outdated tool. The new age had arrived. It was once again evidenced in the material culture.

Classroom Activities

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

The class will search the community for new and old basket forms to discuss and each student will identify a basket found in their search to use in one or all of the following ways. What old basket forms are still found in this area today (in our homes, in antique shops, in museums...)? Can old baskets be found at home, and to whom did they originally belong? Were they brought to America by immigrants or were they made here in Kentucky? What is their history? Check local antique stores or homes of collectors in the neighborhood. What new baskets can you find at home or in local shops?

Schedule a basket show-and-tell. Have students bring in to the classroom any baskets, old or new. If the baskets themselves cannot be borrowed, have the students bring in a picture of them. Ask questions about each of the baskets: For what purpose might it have been made? How old might it be? What historical setting can you place it within, or what historical event might it have seen? How can it be preserved? If it is a new basket, is its form similar to earlier baskets and does it serve a new purpose in our culture today? Can you determine the basket's materials? (For help identifying the materials, use books on woods and plants or ask a local carpenter, naturalist or arborist for assistance. One of these specialists may be able to prepare a sample box for the class containing wood chips and natural materials collected in a local forest or park. Do not collect materials on your own without permission from the landowner).

Create a small exhibit of your class' basket or basket photo collection. Arrange the items on a table and prepare identification labels for each on the computer. Each label should list the type or function of basket, the materials, the age, and the owner ("Lent by Mrs. Smith" or "From the private collection of the Stevens family"). Include a brief statement about each basket taken from your classroom discussion questions. Lay the labels on the table in front of the baskets or prop them up. Do not stick the labels to the baskets themselves. (If you are working with basket photos, you may wish to mount the photo on an illustration board with the label below.) Invite other classes to view the exhibit and discuss the baskets with your class.
(P, PE, OE--Middle, High)

2.20: Students recognize continuity and change in historical events, conditions, trends, and issues in order to make decisions for a better future.

Create a graphic timeline of Woodland Baskets and Lifeways. Begin with hunter/gatherer cultures and continue to the present day. Pair each significant event with a description of how

new basket forms and functions may have developed at this time. Significant events could include the development of hot-rock cooking [fire-heated rocks added to water-filled baskets or bags to boil food] (Archaic Period); the beginnings of agriculture and the building of earthworks or earthen mounds (Woodland Period); the increased dependence upon corn, (Late Prehistoric Period); contact and trade with European settlers (Contact Period). How did baskets serve each of these developments or changes in native lifeways? You may want to add lifeways scenes and basket images to the timeline. **(P, PE, OE--Middle, High)**

Note: Chapters 2 and 3 in this publication are helpful resources for this project.

Language

By comparing the present with past centuries it appears that baskets have fallen somewhat into disuse; however, our language is very slow to reflect those changes. Phrases and expressions that at one time made perfect sense are still used effectively, although their origins may be somewhat puzzling. Baskets were once such an accepted part of our lives that there were numerous identifiable shapes and forms of baskets, such as picnic baskets, laundry baskets, church collection baskets, or grocery baskets. Baskets even played (and still play) a role in some holidays like Easter or May Day. When these are mentioned, a specific image of a basket often comes to mind even though the materials now used are often plastic, metal, or other twentieth-century materials.

Classroom Activity

1.1: Students use research skills to locate sources of information and ideas relevant to a specific need or problem.

Research the origins of basket traditions or basket phrases. How does a basket relate to the origin of the tradition or phrase? Examples: Easter basket traditions, basketball, church collection baskets, the phrases, "Don't put all your eggs in one basket," and the rather morbid, "He's/she's a basket case..." **(P, OE--Middle)**

Tools and Materials for Basketmaking

Only the simplest of tools are needed to make a good basket, most of which may be readily found in any area. Just as Native Americans found basket materials in nature around them, they also found the tools to prepare these materials in nature. The worked edge of a stone tool, a bone, and even a clam shell can be used to cut most basket materials. A bone awl, or even a large thorn, makes a hole through which a rim or handle may be lashed in place. Nature provides natural abrasives like sand, scrubweed, or snakeroot (*Equisetum hyemale*, also known as horsetail) to smooth the handle or to polish a surface. While these tools were used in the pre-contact period, many of them are still being used today. The Europeans introduced steel blades and other tools which are the most common types of tools used in this century.

Kentucky has a wealth of basket materials. The hardwoods of oak and hickory, the inner bark of the basswood (linden), pawpaw and hickory trees, and the vines of the wild honeysuckle and buckbrush (coralberry) are just a few of the recognized materials and species used in basketmaking and commonly found in the state. Grasses, river cane, cattail rushes, pine needles, and willow are used to create baskets of different textures and strengths. Sweetgrass is a plant which has a spiritual significance in Native American culture. Sweetgrass may be selected as a material for a basket which will hold some special or ceremonial items. Some animal materials may even be used in basketmaking, such as horsehair or buffalo hair. In addition to indigenous materials, cultivated materials such as corn husks and wheat shafts were also used.

Classroom Activities

3.4: Students demonstrate ability to be resourceful and creative.

Make a "basket materials collection." This collection could include tools from nature that would be matched to the material. Students may be able to prepare some of the materials to show their ready-to-use state. Be sure to document the plant's natural habitat and prime gathering season. Make an illustration of a basket which could be made from the collected materials or find a photograph in a book showing a basket made from these, or similar, materials. Test the materials you have collected to determine the properties of each.

As an alternative to collecting the materials, collect pictures of baskets made from different materials. Mount each picture on a background board which lists the materials used to make the basket. Exhibit the mounted pictures. Discuss differences in the basket textures, sizes, shapes, and functions. How do these differences relate to the different materials?
(P, PE, OE--Elementary, Middle)

Suggestions: Photocopy basket illustrations from basket books or museum catalogues. Draw or photocopy illustrations of a pack basket in use complete with a tumpline, a two-person gathering basket, a small storage basket with a corn cob stopper to hold precious seeds or dried berries, a larger storage basket holding dried or smoked fish or meats, or a bowl-style basket containing fruits, beans, squash or corn.

2.19: Students recognize the geographic interaction between people and their surroundings in order to make decisions and take actions that reflect responsibility for the environment.

Using books and museum catalogues, research the types of baskets made in different geographic regions. Because basketmakers often use local materials, the baskets can tell us something of the plants, trees and environment of a region at a given time. Prepare a presentation about the baskets of a certain region. What information about this environment may be gained from the baskets? Are baskets of places with similar growing seasons, climates, etc., the same?

Why? Is it possible to classify countries, regions, or cultures by their baskets?
(P, PE, OE--Middle, High)

New Materials from Farming

Native Americans made baskets from a great variety of natural materials. They had to be creative and practical in order to use the resources of their area to make the many types of baskets they needed.

Among farming peoples, the choice of materials and design options for the containers expanded tremendously. In addition to naturally occurring materials, agricultural by-products also became an important resource for making baskets. Some of these materials were corn husks, grasses and stalks, plant vines, etc. They were also rolled into cordage (a long, thin, flexible material), twined, coiled and plaited into different textures and patterns. Determined by time, skill level and quality of materials, the basket might be heavy and crudely constructed, or made of uniformly cut and matched materials. What began as a single-use basket constructed by unskilled hands, eventually became a highly developed, long-lasting container that could withstand several seasons of use and was worthy of an occasional repair.

Foodways

Baskets were important aboriginal or native tools. They were especially important to foodways. Baskets were used to collect foods (particularly nuts, seeds, berries, and roots), to process foods (such as winnowing baskets for seeds and, in agricultural times, sifters to separate corn meal after grinding), and to store foods.

The term "hunter-gatherer" applies not only to cultures with land-based foodways, but also to cultures with water-based foodways. Some baskets were used to trap fish, eels, turtles, and other animals. This was, in some ways, more economical (i.e., less labor intensive) than hunting animals. It involved leading or luring the animals into the trap--a cooperation of sorts between humans and their animal brothers. Often at the end of the day, many fish would have collected in the reservoir-end of the basket after passing through a cone-shaped trap. Many mouths in a village could thus be fed from one day's trapping. While the trapper's basket was working in the river bed, the trapper could address other duties and chores.

Another way of fishing with a basket involved a tool that resembles a scoop. With this tool a person could scoop up several fish at one time, much like with today's aluminum-handled nets. This was often an effective alternative to spearing fish in some cases.

Larger, more heavily-constructed basket traps were used to capture small game such as rabbits, foxes and other animals. In addition to eating the meat, animal hides were used for clothing, and long bones were shaped into tools and musical instruments.

Classroom Activities

2.3: Students identify and describe systems, subsystems, and components and their interactions by completing tasks and/or creating products.

Design a class project to study the types of basket traps needed for hunting and fishing. What structural changes would you need to make to adapt a river trap for land animals? Draw or build a trap and system to catch a wild rabbit. Would you need to modify it to catch a bird? What lure would you use? If students are planning to build traps, arrange a field trip to collect natural materials. **(PE, P--Middle, High)**

3.4: Students demonstrate ability to be resourceful and creative.

The class will work together as a native community of long ago. What foods could you find to gather if you lived in the Ohio River Valley and its watershed during the Archaic Period, 10,000-3,000 years ago (or choose any time period before 1650)? You would likely need a container to carry the food back to your camp or village. You would need to gather enough to eat throughout the winter season. What would you store the food in? What shape and size containers do you need? **(PE--Elementary, Middle)**

2.23: Students identify and describe systems, subsystems, and components and their interactions by completing tasks and/or creating products.

Make a container using various indigenous, or native, materials. Discuss what materials you might try next time to make the container stronger and how you might improve the design. It is important to do this without the benefit of a pattern or prior instruction, except for lessons you may learn from nature. This starts the thought process from a similar perspective as that of the early gatherers and hunters. It can help the students to become dependent on a working knowledge of their environment and the growing and harvesting cycles, as well as help the student to assess their own needs as far as tool technology, etc.
(PE, OE--Middle, High)

Clues... the ideal containers would meet the following objectives:

1. Gathering baskets - Wide top for ease in collecting the harvest.
2. Storage baskets - Do not need handles; sit flat on the ground and are usually covered by some means.
3. Transporting or pack baskets - Solidly constructed to bear heavy weight; somewhat closed or shaped to protect contents from spillage during travel.
   and migration. Should have handle, strap or tumpline (band passed across the wearer's forehead and attached to the load on their back).

"Gatherer" baskets should be tightly woven to hold small berries, nuts, roots, etc. "Hunter" baskets can be more loosely woven and are generally larger to carry turkey, bear and deer parts, etc.

As an alternative, students may write a piece for their writing portfolio which explains the process of making a certain basket, using materials used by Native Americans in and around Kentucky. **(P--High)**

2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.

Working in teams, or "prehistoric communities," assess the need for baskets in the coming year and develop a plan for their creation. Create a calendar based on your knowledge and observation of plants in your area and add to the calendar throughout the school year. Consider the prime harvesting time for the longest, most flexible grasses and the peak gathering time of weaving materials. Record your observations of grass growth and the growing seasons of food sources in your area on your calendar. (For the calendar to coincide with the school year, you may begin with harvesting materials for this year in the fall and observing planting and growth in the spring, for the following year's basket materials.) Ask farmers, crafts people, woodworkers, naturalists or arborists when to cut trees, grasses, cattails, etc. Include time for material preparation (stripping bark, drying grasses...) on your calendar.

When will the birds begin the migration for the season and the frost kill off the plants, leaving the agricultural community dependent on the stored food supplies supplemented by occasional winter kills for fresh meat? When is the best time to harvest nuts? Record these details on your community calendar, too. How many baskets will you need to contain all your staples to survive a winter? Did you include a division of work among the members of your community as you developed your plan? **(PE, P, OE--Elementary, Middle)**

Conclusion

With the explosion of technology and the increasing desire to find newer and easier ways of living, occasionally it becomes obvious that everything old is new again. While few of us identify with the hunter-gatherer and are not largely dependent on baskets to assist us in securing food, some modern examples of baskets we use every day do exist. Some communities encourage shoppers to bring their own shopping bags or containers to market. Many a basket is used today to carry groceries home from the store. The typical shopping basket at the front of many stores today has swing handles and is often made of plastic or canvas. A larger food-carrying basket is now made of crossing metal bars and has been fitted with wheels. We don't carry this basket, we push it. The hiking pouches and book bags evolved from the hunter/gatherer's pack or burden baskets, while cardboard cartons or wooden crates evolved from the shipping basket or even the earlier transporting basket of the Woodland Period, 1,000-3,000 years ago. The baskets look a little different than they did nearly 11,000 years ago, but so do we!

What are the basic properties and objectives of a basket that make it useful today?:
1. Strong, yet lightweight, even under a load.
2. Soft sides and bottom for flexibility.
3. Allows air flow to contents to discourage spoilage.
4. Easily repaired.
5. Abundant materials available for construction anywhere.

What is a basket? A basket is a reflection of our culture and it is a container that gathers and stores insights about our lives.

Riddle: Name a basket type still made of natural materials, not synthetic ones, and guess what it carries? (Hint: It relates to transportation.)
Answer: A gondola beneath a hot air balloon, and it carries people!
Review the properties of the hot air balloon gondola or basket: strong yet lightweight, flexible, it absorbs shocks and bounces when it contacts the ground. Can you imagine landing in a wooden or steel box?!
Can you think of other baskets made from natural materials which we still use today?

Classroom Activities

2.6: Students complete tasks and/or develop products which identify, describe, and direct evolutionary change which has occurred or is occurring around them.

Create a two-column chart comparing ancient baskets with their modern equivalents. Include the materials used in each modernized replacement. Examples: woven fishing scoop → aluminum-handled fishing net; birch bark "mukkuk" (a single piece of bark folded to form a container) → galvanized aluminum or plastic bucket; food storage basket → Tupperware; seed basket → paper envelope or burlap sack; woven-sapling house walls → ???.
(P, PE--Elementary, Middle)

3.4: Students demonstrate the ability to be resourceful and creative.

As a group, discuss the characteristics you would want a basket to have if it were to be used for the following: 1) gathering; 2) storing; 3) transporting. What natural resources would be best to use when creating a basket for each task? Select a few specialized "baskets" (fish trap, bark canoe, woven pouch). What characteristics should they have? How are they like traditional basket forms?

Distribute packets to teams of students. Each packet will contain a set of cards with images of different baskets (use those found at the end of this chapter, and others from basket books and museum catalogues, if you wish). Using the characteristics the group discussed and listed,

categorize each picture in the set of cards according to its probable use (for gathering, storage, etc.). **(PE, OE--Elementary)**

1.11: Students communicate ideas and information to a variety of audiences for a variety of purposes in a variety of modes through writing.

Instruct each student to choose a basket type from their discussion, such as a basket made for gathering seeds. Students will write a story about the basket and the experience they, as a Native American, might have had using the basket. The stories should be creative, showing the student's understanding of the importance of basketry to the Native American. **(P--Elementary)**

2.25: Through their productions and performances or interpretation, students show an understanding of the influence of time, place, personality, and society on the arts and humanities.

Develop a product line of baskets to be made by an arts cooperative in Kentucky and marketed throughout the nation. Consider the functions of the baskets and the qualities each will need to be successful in the marketplace. Also consider the impact of modern basket collecting trends and the interest consumers/collectors have in knowing the origin of their collectibles. What products will you create? How will the products be distributed? Will tourism play a role in your marketing strategy (e.g., will you offer public tours of the workshop?)?

Plan a marketing strategy for your baskets and present elements of the advertising campaign (print ads, television commercials, mail order catalogue listings). How will you capitalize of the revival of interest in crafts nationally and the important new role crafts have in Kentucky tourism? Will you utilize the resources of the Kentucky Craft Marketing Program?
(P, PE, OE--High)

3.4: Students demonstrate the ability to be resourceful and creative.

Draw, photograph, or collect photocopied pictures of different kinds of baskets. Create a bulletin board based on these images. With what you know about the characteristics of certain baskets, match up the names, uses, possible materials, regions of use and manufacture, time period, etc. It is possible to have more than one answer for each basket. (The example on the following page may also be adapted as a simplified form of this activity. Notice that many of these baskets may serve several functions. Discuss the features of the baskets that make them suitable for these many functions.) **(PE, OE--Elementary, Middle)**

Resources

Most publications about Native American baskets of the Woodland region are not as accurate as they should be. Although some have wonderful illustrations, the identifications and the text which accompanies them is often misleading. Please keep this in mind as you find printed resources. The following publication is recommended for its many photographs and listings of basket materials rather than its text or market prices. If you are just looking for images to use for classroom activities, it is appropriate.

Thompson-Johnson, Frances. Price Guide to Baskets (Wallace-Homestead Publishing).

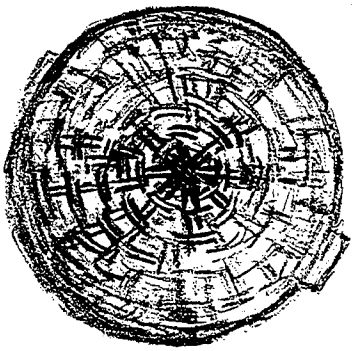
Choices for the basket matching chart on the following page. Answers are printed below.

Seed Storage Basket	Gathering or Harvesting Basket
Burden or Pack Basket	Drying Basket
Transportation Basket	Has Tumpline or Strap
Storage Basket	Fishing Trap
Agricultural Basket	Has Ear Handles

Answers to basket matching chart on following page:

a. Burden or pack basket, transportation basket, storage basket, gathering or harvest basket, agricultural basket.
b. Transportation basket, gathering or harvest basket, agricultural basket.
c. Drying basket, agricultural basket, has ear handles.
d. Drying basket, agricultural basket, has ear handles.
e. Seed storage basket, storage basket, agricultural basket.
f. Gathering or harvest basket, agricultural basket, has tumpline or strap.
g. Fishing trap, agricultural basket.
h. Seed storage basket, storage basket, agricultural basket.

Sample Illustrations of Basket Types. May be used with basket matching activity on previous page.



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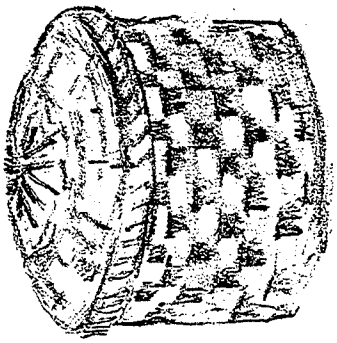
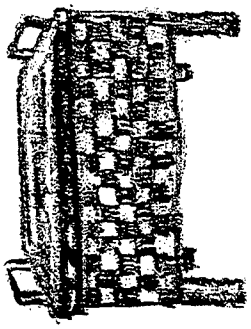


h.



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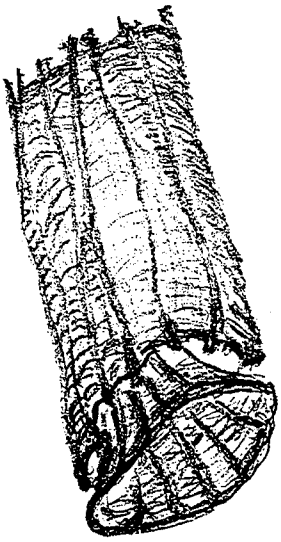
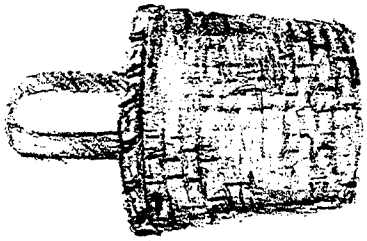
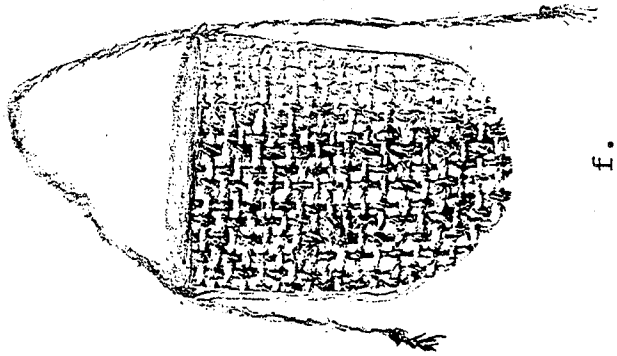


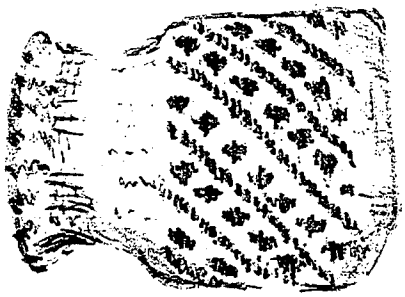
g.



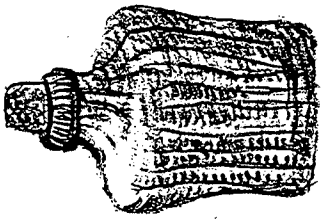
b.



f.



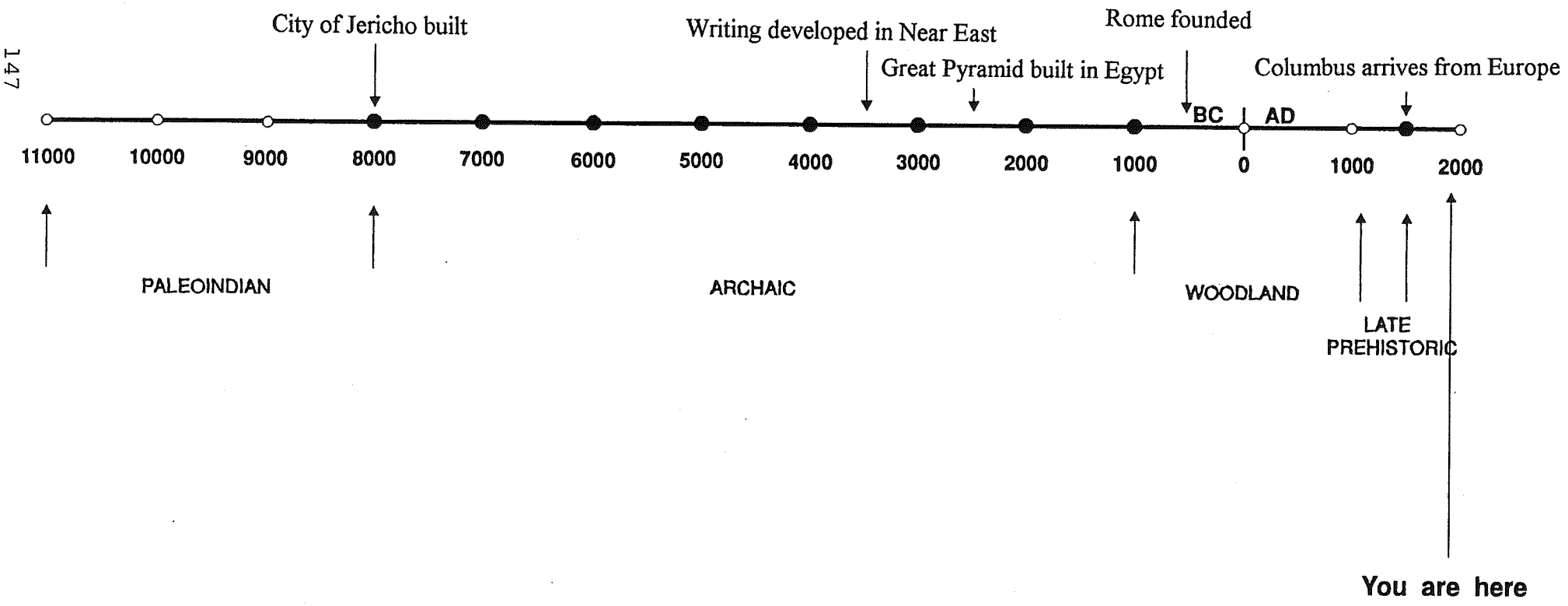
a.



e.

Appendix A

Timeline of Kentucky's Prehistory in World Perspective



Appendix B

Additional Native American Cultural Resources

In addition to the resources listed after the chapters, we offer the following suggestions. (Please check the chapters for general and specific resources not repeated here.)

Appleton, LeRoy H. American Indian Design and Decoration. (Dover, 1971).

Coe, Ralph T. Sacred Circles: Two Thousand Years of North American Indian Art. (Nelson Gallery of Art-Atkins Museum of Fine Arts exhibition catalogue, 1977).

Cohlene, Terri. Little Firefly: An Algonquian Legend. (Watermill Press, 1990).

Note: This is part of the Native American Legends Series; good books for readers up to age 13.

Goble, Paul. The Gift of the Sacred Dog. (Hardcover: New York: Bradbury Press, 1980; Paperback: New York: Macmillan, 1987).

Hirshfelder, Arlene and Martha Kreipe de Montaño. The Native American Almanac: A Portrait of Native America Today. (New York: Prentice Hall, 1993).

Klein, Barry, ed. Reference Encyclopedia of the American Indian. 6th ed. (West Nyack, NY: Todd Publications, 1992)

Note: This large volume, updated periodically, provides long listings of Native American nations, organizations, services, resource centers, audio-visual aids, biographies, etc.

Kopper, P. The Smithsonian Book of North American Indians Before the Coming of the Europeans. (New York: Smithsonian Books, 1986).

Maurer, Evan M. The Native American Heritage: A Survey of North American Indian Art. (Art Institute of Chicago exhibition catalogue, 1977).

McLuhan, T. C. Touch the Earth: A Self-Portrait of Indian Existence. (New York: Simon and Schuster, 1971).

Minnetrista Cultural Center. Woodland Peoples: An Educational Unit (Muncie, IN: Minnetrista Cultural Center, 1993).

Nabokov, Peter and Robert Easton. Native American Architecture. (Oxford University Press, 1989).

Penney, David W. Art of the American Indian Frontier. (Seattle: University of Washington Press, 1992).

Perdue, Theda. The Cherokee (New York: Chelsea House, 1989).

Note: This book is from the Indians of North America Series by Chelsea House. The entire series of books, each book documenting an individual tribe, is to be recommended.

Prucha, Francis Paul, ed. Documents of United States Indian Policy. (Lincoln: University of Nebraska Press, 1975).

Thomas, David Hurst, et. al., eds. The Native Americans: An Illustrated History. (Atlanta: Turner Publishing, 1993).

Viola, Herman J. and Carolyn Margolis, eds. Seeds of Change: A Quincentennial Commemoration. (Washington: Smithsonian Institution Press, 1991).

Walther, Peggy Roney. Kentucky The Bluegrass State. (Montgomery: Clairmont Press, 1994).

Weatherford, Jack. Indian Givers: How the Indians of the Americas Transformed the World. (New York: Crown, 1989).

_____. Native Roots: How the Indians Enriched America (New York: Crown, 1991).

New Videos from KET (Kentucky Educational Television):

Highlights from the 1994 Kentucky State Fair Native American Exhibit. Three 8-minute pieces on the following: Basketmaking, Flutemaking and Storytelling, and Clothing. Interviews and images relating to the historic and current views on these traditions. For information on purchasing a videotape, please call 1-800-432-0951.

A Native Presence. Two 1-hour documentaries investigating the presence of Native Americans in Kentucky, past and present. Program 1: "Dispelling the Myth," interviews with archaeologists, historians, and Native Americans discussing the myth that Kentucky was not originally inhabited by Indians. Program 2: "Embracing Our Past," interviews and coverage of current events that highlight Kentuckians from across the state embracing their Native heritage. This two-part documentary will first air on KET in late January 1995.

To receive a catalogue with a good selection of books, tapes, and other resources: Cherokee Publications, P. O. Box 430, Cherokee, NC 28719, (704)488-8856.

Appendix C

Area Institutions with Resources for Teachers

This is a **partial** listing of museums and other interpretive sites that have described, through a written survey, their resources for students and teachers in the following subject areas: Native American culture, Kentucky and/or regional prehistory, archaeology/anthropology of North America. Teachers are encouraged to seek out other resources in your area, including local historical societies, colleges and universities, parks, and libraries.

Resources Available at each site are coded as follows:
1= Permanent Exhibits; 2=Temporary Exhibits; 3=Traveling Exhibits; 4=Suitcase Exhibits; 5=Teacher packets/curriculum materials; 6=Teacher in-service/training programs; 7=School/public tours; 8=Outreach (off-site) school programs; 9=publications; 10=Programs for the general public; 11=Artists in residence/performing arts, etc.; 12=Audio-Visual; 13=Retail Sales Shop; 14=Speaker's Bureau; 15=Other.

Institution/organization: **American Cave Museum, Amer. Cave Conservation Assn.**
Mailing Address: P. O. Box 409, Horse Cave, KY 42749
Street Address: 131 Main Street
Telephone: (502) 786-1466 County: **Hart**
Contact Name: David Foster
Days & Hours of Operation: Daily, Year-round, 9 a.m. - 5 p.m.
Admission: Adults $6, Children 6-12 $3.00, Group price available.
Rec. length of school visit: 1-1/2 hrs.
Accessible: Museum is accessible, cave tour is not. Elevator on site.
Eating Area: Yes.
Resources Available: 1; 2; 5; 6; 7; 8; 9; 10; 12; 13; 14. Programs for all ages; maximum group size 75. Exhibits and tours include Native American use of caves and artifacts found on site. Cave tours available. Special topics, including Native Americans and Caves, may be requested.

Institution/organization: **Behringer - Crawford Museum**
Mailing Address: P. O. Box 67, Covington, KY 41012
Telephone: (606) 491-4003 County: **Kenton**
Contact Name: Betty Payne
Days & Hours of Operation: Tues-Fri. 10 a.m. - 5 p.m., Sat./Sun 1-5 p.m.
Admission: $2.00 adults, $1.00 children/seniors. Tour rates differ.
Rec. length of school visit: 1-1/2 hr.
Accessible: Yes. Special signage and hands-on activities.
Eating Area: Picnic sites.

Resources Available: 1 (Prehistoric: Paleontology & Archaeology); 2; 3 ("Silent Testimony"); 4 (Prehistory); 6; 7; 8; 10; 13; 14. Tours for ages 4+; maximum group size 90-100. Research library. Collections focus on Northern Ky.

Institution/organization: **Big Bone Lick State Park**
Mailing Address: 3380 Beaver Rd., Union, KY 41091
Telephone: (606) 384-3522 County: **Boone**
Days & Hours of Operation: 8 a.m. - 8 p.m. Memorial Day to Labor Day; 9 a.m. - 5 p.m. Sept.-Dec., Feb., March; closed Tuesday & Wednesday
Rec. length of school visit: 2-1/2 - 3 hrs.
Accessible: Yes. Eating Area: Yes.
Resources Available: 1 (fossilized mastodon & bison bones, Indian objects; American bison herd); 5; 12; 13. Tours are self-guided; group number: 25-30; best for grades 3-8.

Institution/organization: **Blue Licks Battlefield State Park**
Mailing Address: P. O. Box 66
Street Address: US Hwy. 68
Telephone: (606) 289-5507 County: **Robertson**
Contact Name: Bill Stevens/Joetta King
Days & Hours of Operation: Mon.-Sun. 9-5
Admission: $1.50 adults/$1 children 12 & under
Rec. length of school visit: 1-1/2 hrs.
Accessible: Yes. Eating Area: Picnic sites.
Resources Available: 1 (pioneer, Native American, local history, archaeology); 7 (guided, hands-on); 12 (8 min. program on park history); 13. Tour group maximum size 25. Special outdoor trail walks available Memorial Day to Labor Day.

Institution/organization: **The Children's Museum of Indianapolis**
Mailing Address: P. O. Box 3000
Street Address: 3000 N. Meridian, Indianapolis, IN 46206
Telephone: (317) 924-5431 County: **Marion, IN**
Days & Hours of Operation: Tues-Sun 10-5, with Monday & holiday hours.
Open Thurs. eve. 5-8 p.m.
Admission: None
Accessible: Yes. Eating Area: Restaurant in museum.
Resources Available: 1; 2; 3; 5 (Teachers' Resource Link, 317-921-4001); 6 (School Services, 317-921-4009); 7; 10; 11; 12; 13. Native American Festival each Fall for 3 weeks.

Institution/organization: **Dept. of Archaeology, University of Louisville**
Mailing Address: University of Louisville Dept. of Archaeology
Street Address: 1820 Arthur, Louisville, KY 40292

Telephone: (502) 852-6724 County: **Jefferson**
Days & Hours of Operation: M-F 7:30 a.m. - 3 p.m.
Admission: None
Accessible: Yes. Eating Area: Yes.
Resources Available: 5; 6; 7; 8; 10; 14. Tours for grades 6+; maximum group size 20.

Institution/organization: **Fort Boonesborough State Park**
Mailing Address: 4375 Boonesboro Rd., Richmond, KY 40475
Telephone: (606) 527-3131 County: **Madison**
Contact Name: Robert Wilson
Days & Hours of Operation: 9-5:30 daily, Apr. 1-Oct. 31; Closed M,T after Labor Day
Admission: Adults $4, Children $2.50; group rates for 10+
Rec. length of school visit: 2-3 hrs.
Eating Area: Snack bar open Memorial Day-Labor Day; grocery open year round
Accessible: Yes. Telephone equipped with TDD.
Resources Available: 1 (artifacts and interpretive paintings); 7 (self-guided); 10; 11; 12 (film about Daniel Boone Era is part of tour); 13. Exhibit interprets Indian culture during Contact Times.

Institution/organization: **Inter-Tribal Indian Festival**
Mailing Address: 4800 New Hartford Road, Owensboro, KY 42303-1899
Telephone: (502) 686-4495 County: **Daviess**
Contact Name: Libby Warren
Days & Hours of Operation: Oct. 7, set-up; Oct. 8, 9 a.m. - 6 p.m.; Oct. 9, 9 a.m. - 4 p.m.
Admission: $2 Adults, $1 Students (No more than $4 per vehicle)
Accessible: Yes. Sign interpreters available. Eating Area: Cafeteria & brown bag.
Resources Available: 2; 8 (Storyteller and speaker on Native and Frontier lifeways); 13. The weekend festival features exhibits by Native Americans, music, dance, food, sales, etc. All schools are welcome during set-up on Oct. 7

Institution/organization: **J. B. Speed Art Museum**
Mailing Address: P. O. Box 2600, 40201-2600
Street Address: 2035 S. Third Street, Louisville, KY 40208
Telephone: (502) 636-2893 County: **Jefferson**
Contact Name: Scheri Stewart, Tour Coordinator
Days & Hours of Operation: Tues.-Sat. 10-4, Sun. 12-5
Admission: Only for special exhibits and guided tours. Rec. length of school visit: 1 hr.
Accessible: Yes. Eating Area: Brown bag on lawn; restaurant in museum.
Resources Available: 1 (focus on Great Plains region); 2; 4 (Suitcase exhibit, "Everyday Objects from Native American Life," $25/wk.); 5 ("Native American Educational Packet," $8); 6; 7 (Thematic, by grade level); 10; 12; 13; 14. Tours for K-12. Maximum tour size 65-125. One chaperone per 10 students. Special KERA-related tours for K-3, 4-5, 6-8, 9-12.

Institution/organization: **Ky. Dam Village State Resort Park**
Mailing Address: Box 69
Street Address: Highway 641
Telephone: (502) 362-4271 County: **Marshall**
Admission: None Rec. length of school visit: 1/2 day
Accessible: Yes. Eating Area: Restaurant & picnic.
Resources Available: 2 (Archaeology display in November); 10 (Buffalo dinner, programs about Native lifestyles and storytelling in February). Groups please call in advance.

Institution/organization: **Kentucky Down Under**
Mailing Address: P. O. Box 189, Horse Cave, KY 42749
Street Address: 3700 L & N Turnpike, Horse Cave, KY 42749
Telephone: (502) 786-2634 County: **Hart**
Contact Name: Marilyn Dyer
Days & Hours of Operation: 8am-6pm Summer, 9am-5pm Winter, 7 days per week.
Admission: Summer $11.50 adults, $6.50 ages 5-14; Winter $6.50 adults, $4.50 ages 5-14; Group rates available.
Rec. length of school visit: 3-1/2 - 5 hrs.
Accessible: animal exhibits, yes; cave, no. Eating Area: Yes.
Resources Available: 1 (cave tour, animal exhibits with buffalo, elk, whitetail deer); 7; 8; 13.

Institution/organization: **Ky. Heritage Council's Ky. Archaeology Education Network**
Mailing Address: PCRA, 101 American Bldg.,U of K, Lexington, KY 40506-0100
Street Address: 574 S. Upper Street, Lexington
Telephone: (606) 257-1919 County: **Fayette**
Contact Name: A. Gwynn Henderson, State Network Coordinator
Days & Hours of Operation: 1-4, M-F
Admission: None Rec. length of school visit: 1/2 hr.
Accessible: Yes.
Resources Available: 5 (small lending library of Ky-focused teacher materials); 6 (one workshop each year in conjunction with the Ky. Historical Society); 7 (tours of archaeology lab); 12 (a few videos in the lending library). The Network is a clearing house; teachers may call with needs and questions. To join the Network, call for an application. Network participants receive quarterly newsletter (*Archaeology and Public Education*) and may bring groups of 10 students to lab tour. Reservations required for tours; only street parking is available. A resource list on Kentucky prehistory is available to participants.

Institution/organization: **Kentucky Historical Society**
Mailing Address: P. O. Box H, Frankfort, Ky 40602-2108
Street Address: Old State Capitol, Broadway & Lewis, Frankfort, KY
Telephone: (502) 564-3016 County: **Franklin**

Contact Name: Carol McGurk, School tours; Mary Ann Conley, Traveling exhibits bookings
Days & Hours of Operation: M-Sat. 9-4 p.m.; Sun. 12-4 p.m.
Admission: None Rec. length of school visit: 45 min. - 2 hrs.
Accessible: Yes Eating Area: Picnic area on lawn.
Resources Available: 1 (Prehistoric Ky.); 3 (poster exhibits about Ky. Archaeology & SE U.S. prehistoric cultures); 5 ("Building a Society" on frontier Ky.); 6 (annual series); 7 (general tour includes Native cultures). General Tour for grades 1-5; up to 60 students per hour; reservations required. Traveling poster exhibits available for 3-wk. bookings (not available to schools).

Institution/organization: **The Kentucky Museum, Western Kentucky University**
Mailing Address: One Big Red Way, Bowling Green, KY 42101
Street Address: 14th & Kentucky Streets
Telephone: (502) 745-2592 County: **Warren**
Contact Name: Earlene Chelf
Days & Hours of Operation: 9:30-4 Tues-Sat.; 1-4 p.m. Sun.
Admission: Adults $2, Children $1, Teachers & Chaperones admitted free.
Rec. length of school visit: 1-1/2 - 2 hrs.
Accessible: Yes. Sign language interpreters and other accommodations available upon request.
Eating Area: Lunch available through University Center or brown bag.
Resources Available: 1; 2; 3; 4; 5; 6; 7; 8 (Staff give presentations); 9; 10; 11; 12 (Staff give slide programs at community sites); 13; 14. Felts House interpretive program (Social Studies) geared for grade 4. Ideal group size 25-30, but larger may be accommodated. Collections include 100,000+ Native American artifacts. Museum manages many prehistoric objects on behalf of Mammoth Cave National Park.

Institution/organization: **Mountain Life Museum, Levi Jackson State Park**
Mailing Address: 998 Levi Jackson Mill Rd., London, KY 40741
Telephone: (606)878-8000 County: **Laurel**
Days & Hours of Operation: April-Oct., 9 a.m.-4:30 p.m. daily
Admission: Adults $1.25; $.50 children
Rec. length of school visit: 1 hr. Eating Area: Shelter house for brown bag.
Accessible: Not accessible to wheelchairs.
Resources Available: 1 (Native American projectile points and tools); 13. Tours are self-guided; ideal group size=30; grades 1 and up. Native American room interprets artifacts and culture; pioneer and early farming artifacts also exhibited.

Institution/organization: **Old Fort Harrod State Park**
Mailing Address: P. O. Box 156
Street Address: South College Street, Harrodsburg, KY 40330
Telephone: (606) 734-3314 County: **Mercer**
Contact Name: Susan Barrington

Days & Hours of Operation: 8:30-5, Mar 16-Oct.31; 8:00-4:30, Nov.1 - Mar 15.
Admission: Yes Rec. length of school visit: 1-1/2 hrs.
Accessible: Partially. Eating Area: Picnic.
Resources Available: 1 (Pioneer Ky., Indian artifacts); 7 (in Spring and Fall, includes performance of drama, "The Legend of Daniel Boone," and demonstrations); 13.

Institution/organization: **Owensboro Area Museum of Science & History**
Mailing Address: 220 Daviess St., Owensboro, KY 42303
Telephone: (502) 683-0296 County: **Daviess**
Contact Name: Elizabeth A. Brewer, Exec. Director
Days & Hours of Operation: M-F 8 a.m. - 4:30 p.m.; Sat-Sun 1 - 4 pm
Admission: Call for info. Rec. length of school visit: 2 hrs.
Accessible: Yes.
Resources Available: 1, 2, 3 (Ky. Natural History, Regional Pre-contact cultures, Regional History); 4 (Geology/Mineralology, Paleontology, Native American); 5; 6; 7; 8; 10; 11; 12 13; 14. Museum renovations continue after reopening in Nov. 1994. Tour groups should be divided into 25-30 per group.

Institution/organization: **Pennyroyal Area Museum**
Mailing Address: P. O. Box 1093, Hopkinsville, KY 42241
Street Address: 217 E. 9th, 42240
Telephone: (502)887-4271 County: **Christian**
Contact Name: Debra Pence-Massie
Days & Hours of Operation: 8:30 - 4:30 M-F, 10-3 Sat.
Admission: $1 adults, .50 children Rec. length of school visit: 30-45 min.
Accessible: Partially - restrooms are not fully accessible.
Eating Area: Brown bag for small groups, outdoors
Resources Available: 1(Trail of Tears exhibit); 2 (each Fall); 6; 7 ("Indian Life & Lore" program by reservation 2 wks. in advance, thru grade 8); 8 ("Indian Life & Lore"); 10 (often in September); 13; 15 (books, tools, lesson plans available for loan).

Institution/organization: **Shaker Village of Pleasant Hill**
Mailing Address: 3501 Lexington Road, Harrodsburg, KY 40330
Telephone: (606) 734-5411 County: **Mercer**
Contact Name: Susan Lyons Hughes
Days & Hours of Operation: Daily, 9 a.m.-6 p.m.
Admission: Yes Eating Area: Restaurant or brown bag.
Accessible: Yes. Some parts of village offer challenges to wheelchairs. Special arrangements available with notice.
Resources Available: 1; 2; 5; 7 (Special tours in April, "Sheep to Shawl," and October, "Fall on the Farm"); 9; 10; 11; 13. Continuing archaeological work takes place around the village; Dr. Kim McBride operates a summer archaeological field school. Archaeology of the village is

emphasized. Advance scheduling of tours advised but not required, except during "Sheep to Shawl" and "Fall on the Farm." One adult per every 15 students.

Institution/organization: **University of Ky. Art Museum, Singletary Center for the Arts**
Street Address: Euclid & Rose, Lexington, KY 40506
Telephone: (606)257-5716 County: **Fayette**
Contact Name: Kerry Zack
Days & Hours of Operation: Tues.-Sun 12-5
Admission: None Rec. length of school visit: 1 hr.
Accessible: Yes. Eating Area: Close by, but not at museum.
Resources Available: 2 (Native American works periodically on exhibit); 5; 6; 7. The museum collection includes a small number of Northwest Coast Native American art (one highlight is a Kwakiutl totem pole), but these works are not on permanent display. Maximum tour group at one time, 60; two-weeks notice required.

Institution/organization: **University of KY Museum of Anthropology**
Mailing Address: 211 Lafferty Hall, U of K, Lexington, KY 40506-0024
Telephone: (606)257-7112 County: **Fayette**
Contact Name: Mary Lucas Powell, Director/Curator
Days & Hours of Operation: M-F, 8:30 - 4:30
Admission: None Rec. length of school visit: 30 minutes
Accessible: Yes.
Resources Available: 1 (exhibits on Kentucky prehistory, cultural anthropology, physical anthropology); 2; 4 (4 suitcase exhibits of Native American artifacts from Ky. available with Teacher's Guide); 7. Tours booked through Museum Secretary (606)257-7112; maximum group size 30. Extensive archaeological research collections available to qualified scholars.

Institution/organization: **Wickliffe Mounds Research Center**
Mailing Address: P. O. Box 155, Wickliffe, KY 42087
Street Address: 94 Green Street
Telephone: (502) 335-3681 County: **Ballard**
Contact Name: Lisa Marie Engen
Days & Hours of Operation: 9 a.m. to 4:30 p.m. daily, March-Nov.
Admission: Yes Rec. length of school visit: 1 hr.
Accessible: Yes. Eating Area: Picnic area.
Resources Available: 1 (Artifacts and excavations of a Mississippian village); 5; 7; 8 (class visits by staff members); 12 (video on archaeology/mounds); 13 (reproduction artifacts and books). Groups of 80 or less preferred; 1 adult per 12 students. Teachers and chaperones admitted free. Reservations must be made at least 2 wks. in advance. Site is a Mississippian village, circa 950-1350 A.D. Excavations and exhibits interpret life in Western Ky. before Columbus.